PB-248 260

THE FATE OF NITROGEN OXIDES IN THE ATMOSPHERE: APPENDICES

Chester W. Spicer

Battelle Columbus Laboratories

Prepared for:

Environmental Protection Agency

13 September 1974

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE

PB 248 260

008075

FINAL REPORT
APPENDICES

on

THE FATE OF NITROGEN OXIDES IN THE ATMOSPHERE

to

COORDINATING RESEARCH COUNCIL, INC.
(CAPA-9-71)

and

U.S. ENVIRONMENTAL PROTECTION AGENCY
(Contract No. 68-02-0799)

September 13, 1974

by

Chester W. Spicer

BATTELLE
Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
US Department of Commerce
Springfield, VA. 22151

BIBLIOGRAPHIC DATA SHEET	1. Report No. CRC-APRAC-CAPA-9-71-2	2.	3. Recipient's Accession No.
4. Title and Subtitle The Fate of Nitrogen Oxides in the Atmosphere -- Appendices			5. Report Date Sept. 13, 1974 6.
7. Author(s) Chester W. Spicer			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Battelle Columbus Laboratories 505 King Avenue Columbus, Ohio 43201			10. Project/Task/Work Unit No. 11. Contract/Grant No.
12. Sponsoring Organization Name and Address Environmental Protection Agency, Research Triangle Park, North Carolina 27711 and The Coordinating Research Council, Inc, 30 Rockefeller Plaza, New York, New York 10020			13. Type of Report & Period Covered Final Report 14.

15. Supplementary Notes

Not releasable to the general public until December 1975.

16. Abstracts The program consisted of three distinct phases involving analytical methods development, field studies, and analysis and interpretation of the field study results. The analytical development phase of the program involved developing or refining state-of-the-art techniques for the determination of ambient levels of PAN, NH_3, and NH_4^+. The field sampling phase of the program consisted of 5 weeks of air monitoring and particulate collections in St. Louis, MO and West Covina, CA. In addition, NO, NO_2, O_3, NO_2^-, NO_3^- and C, H, N were determined. Meteorological variable including wind speed, wind direction, temperature, relative humidity and solar intensity were also monitored continuously. In St. Louis, several rainfall samples were collected and analyzed for trace nitrogen compounds. Composite dust samples were collected in both cities and analyzed for nitrogen constituents. Silver-membrane filter samples were also taken in West Covina for analysis by electron spectroscopy chemical analysis (ESCA).

17. Key Words and Document Analysis. 17a. Descriptors

Air Pollution
Nitrogen
Atmospheric
Air Quality
Ozone
NO--NO_2-NO_x
Ammonia
Peroxyacetyl Nitrate
Nitric Acid
Aerosol
Rainfall
Dustfall

17b. Identifiers/Open-Ended Terms

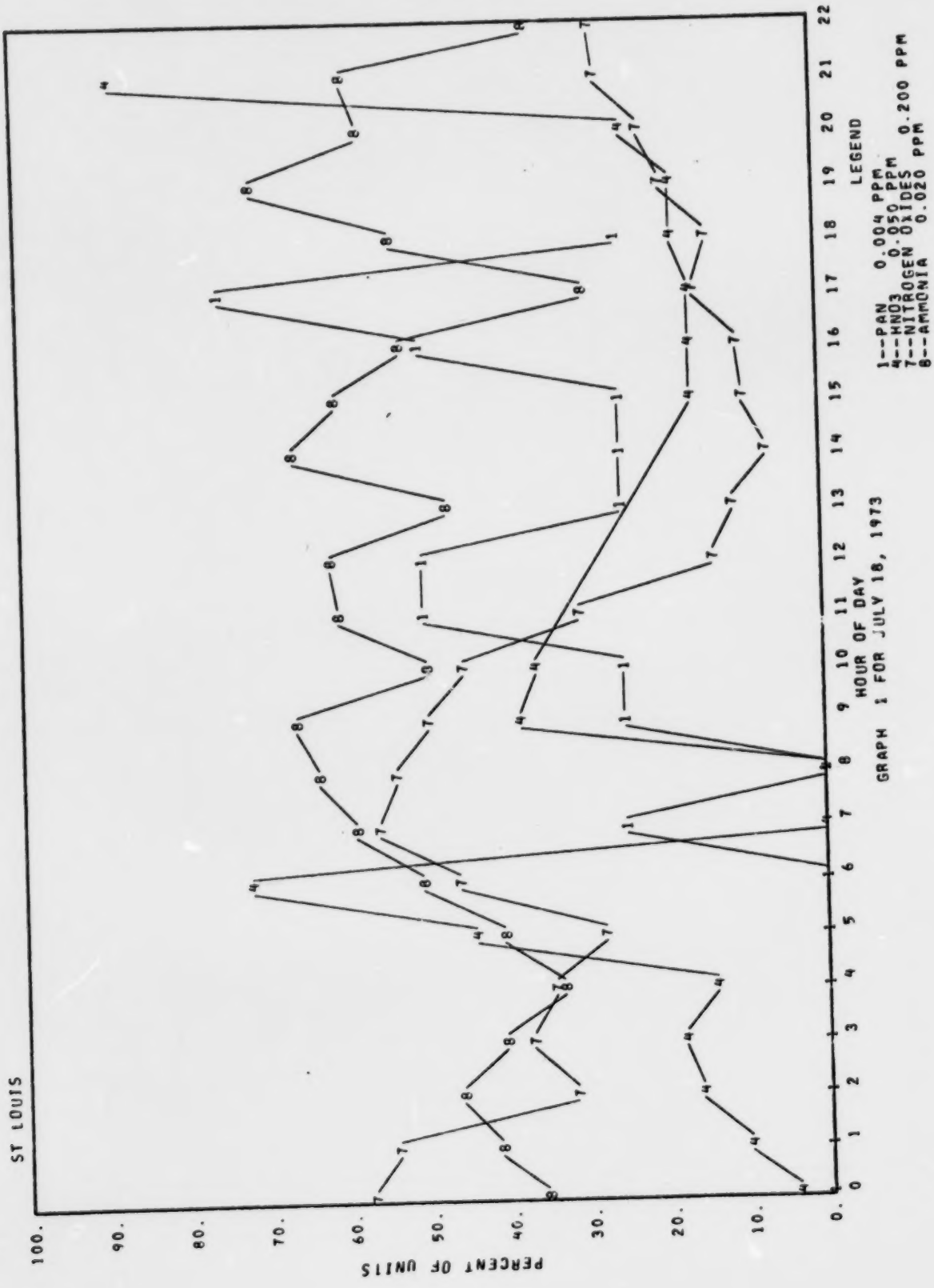
St. Louis, Missouri
West Covina, California

17c. COSATI Field/Group 13B; 07B; 07C; 07D; 04B; 11C

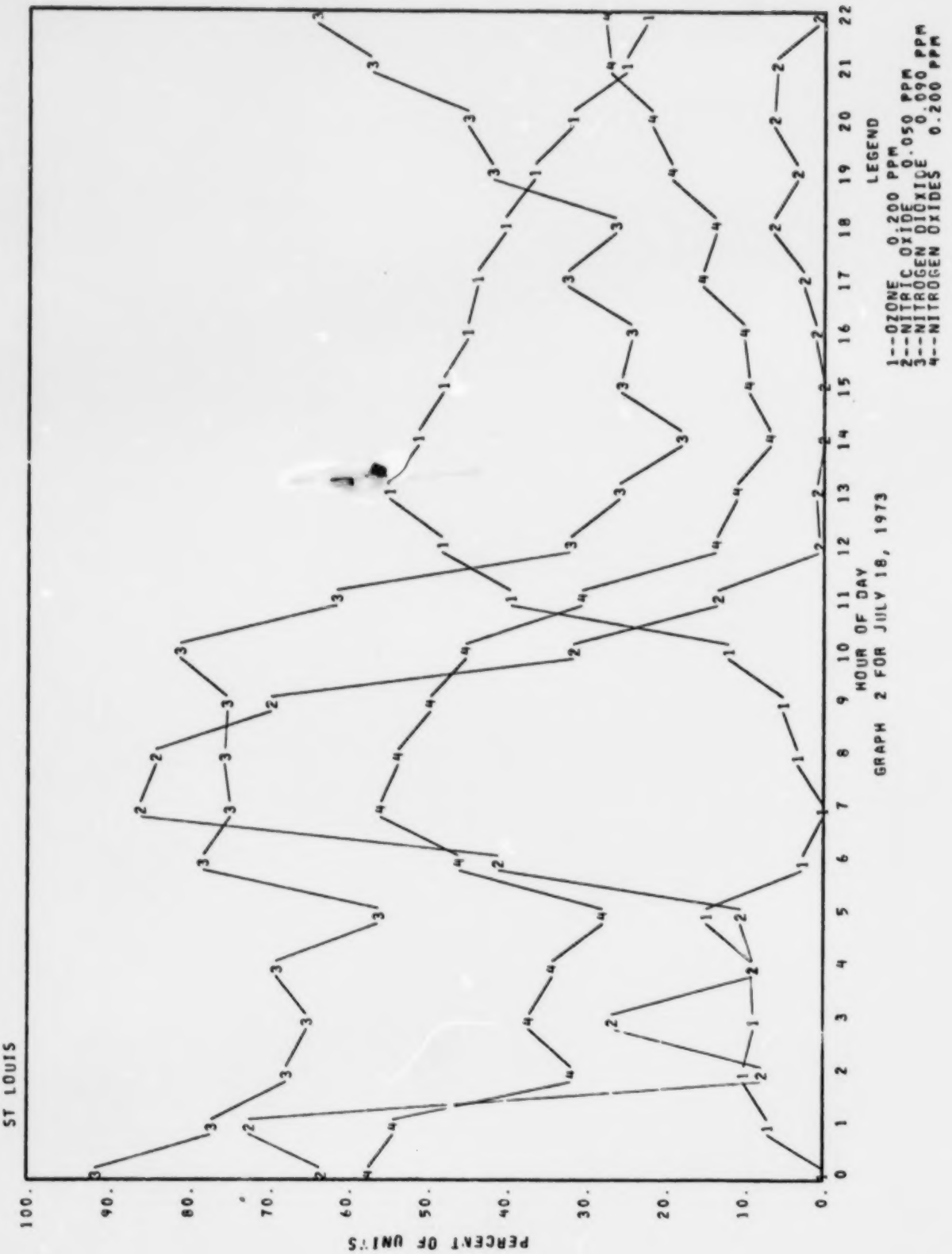
18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
Releasable to the general public.	UNCLASSIFIED	261
	20. Security Class (This Page) UNCLASSIFIED	22. Price 9.00

APPENDIX A

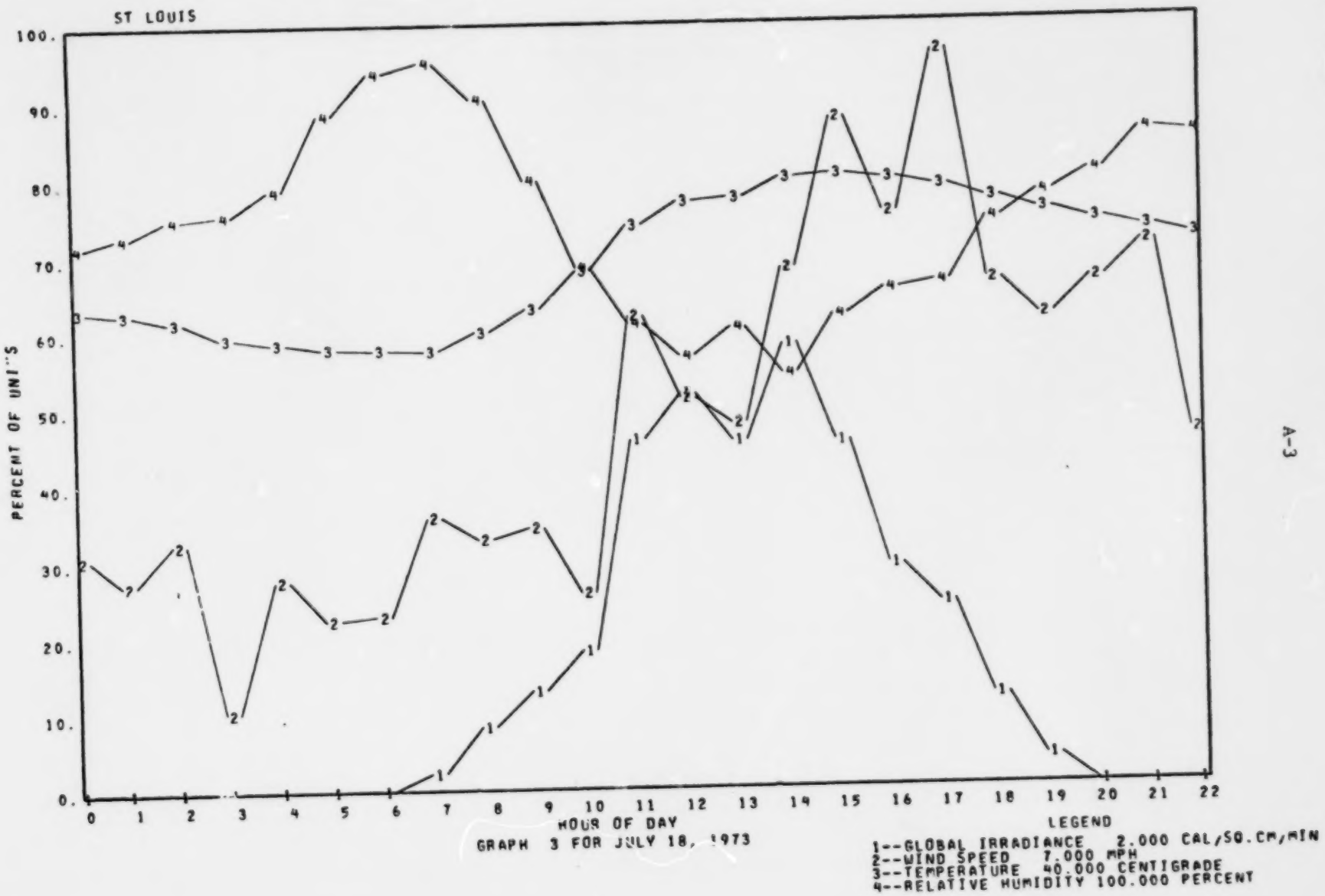
ST. LOUIS DATA



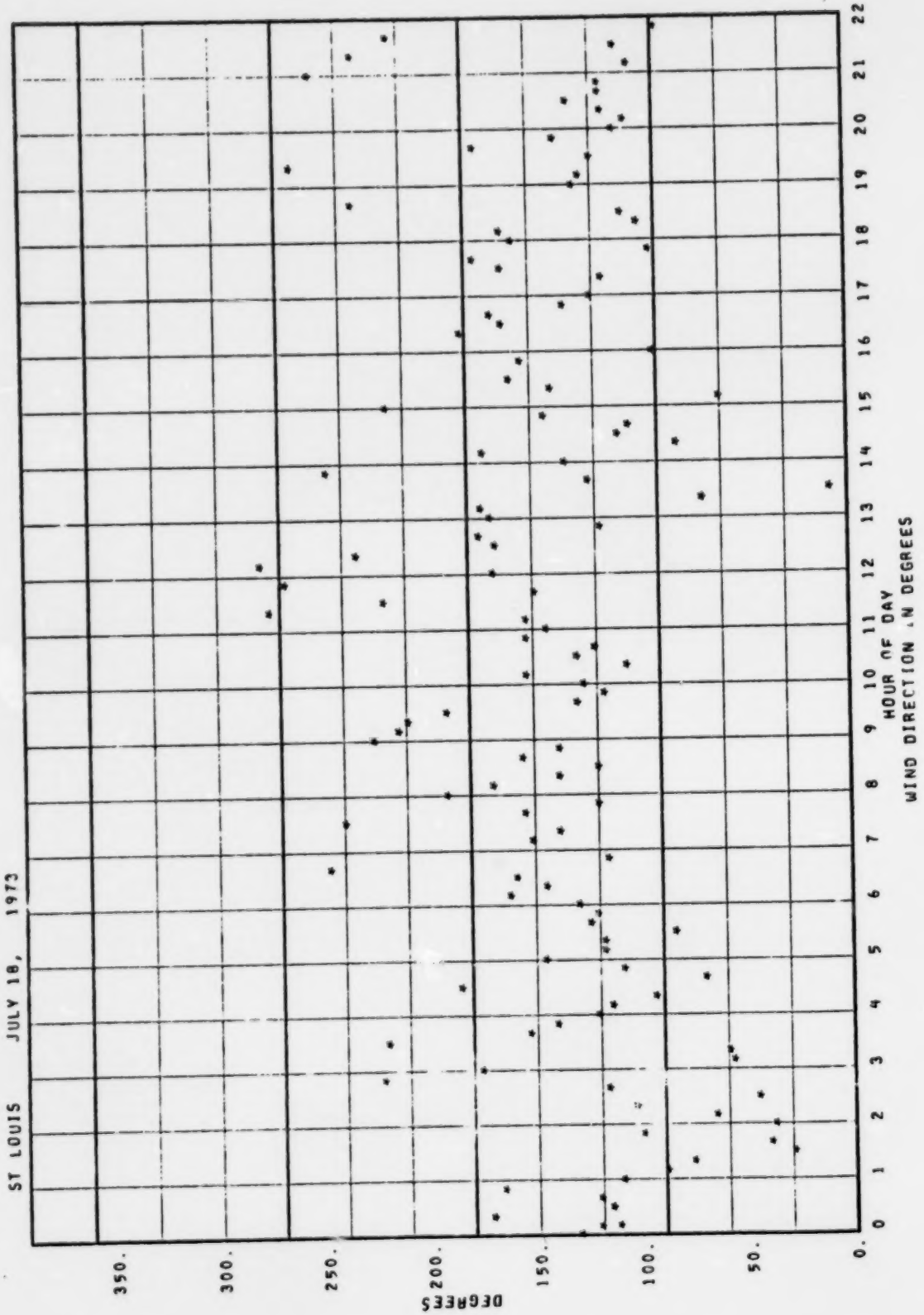
GRAPH 1 FOR JULY 18, 1973

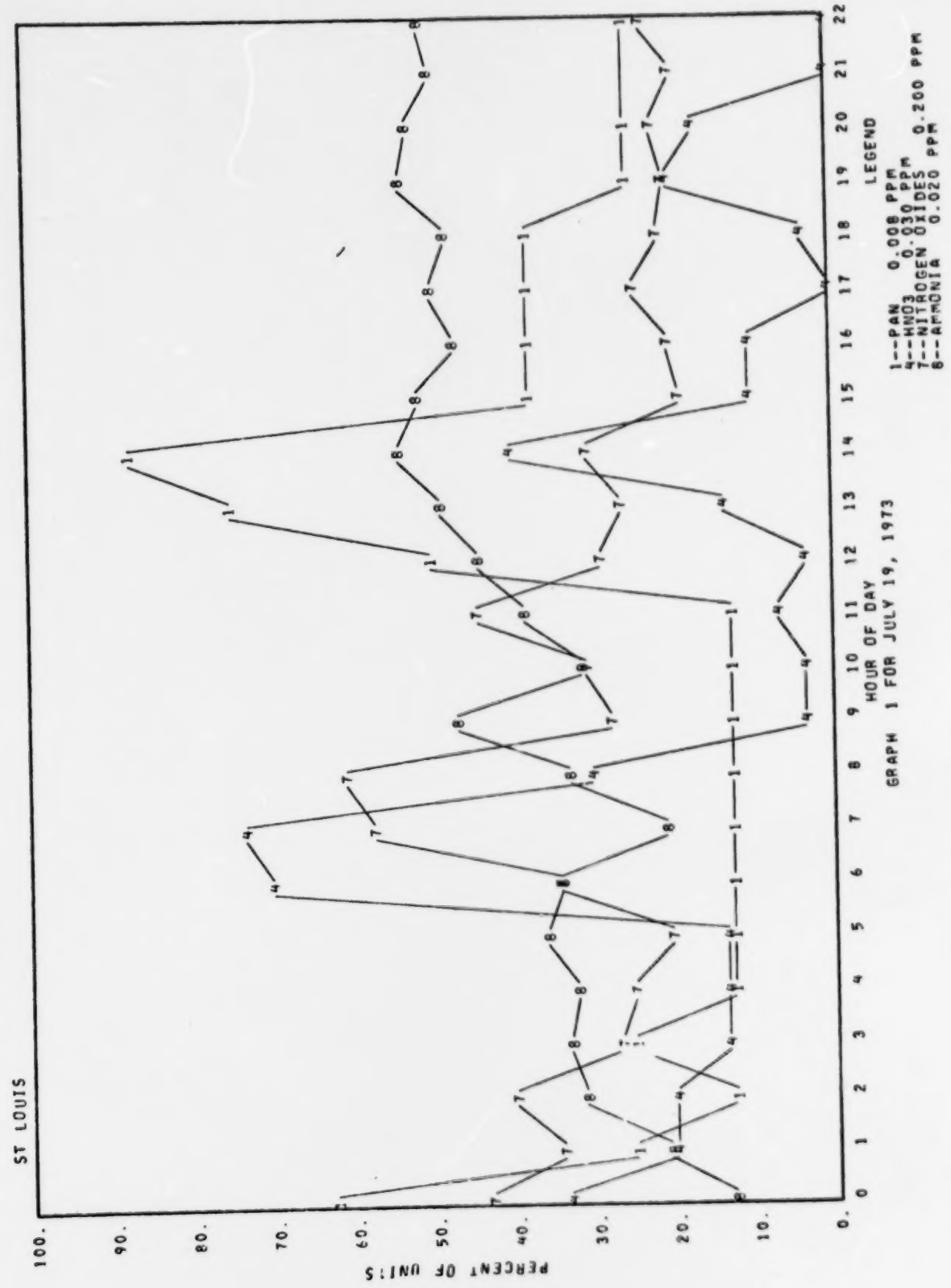


GRAPH 2 FOR JULY 18, 1973

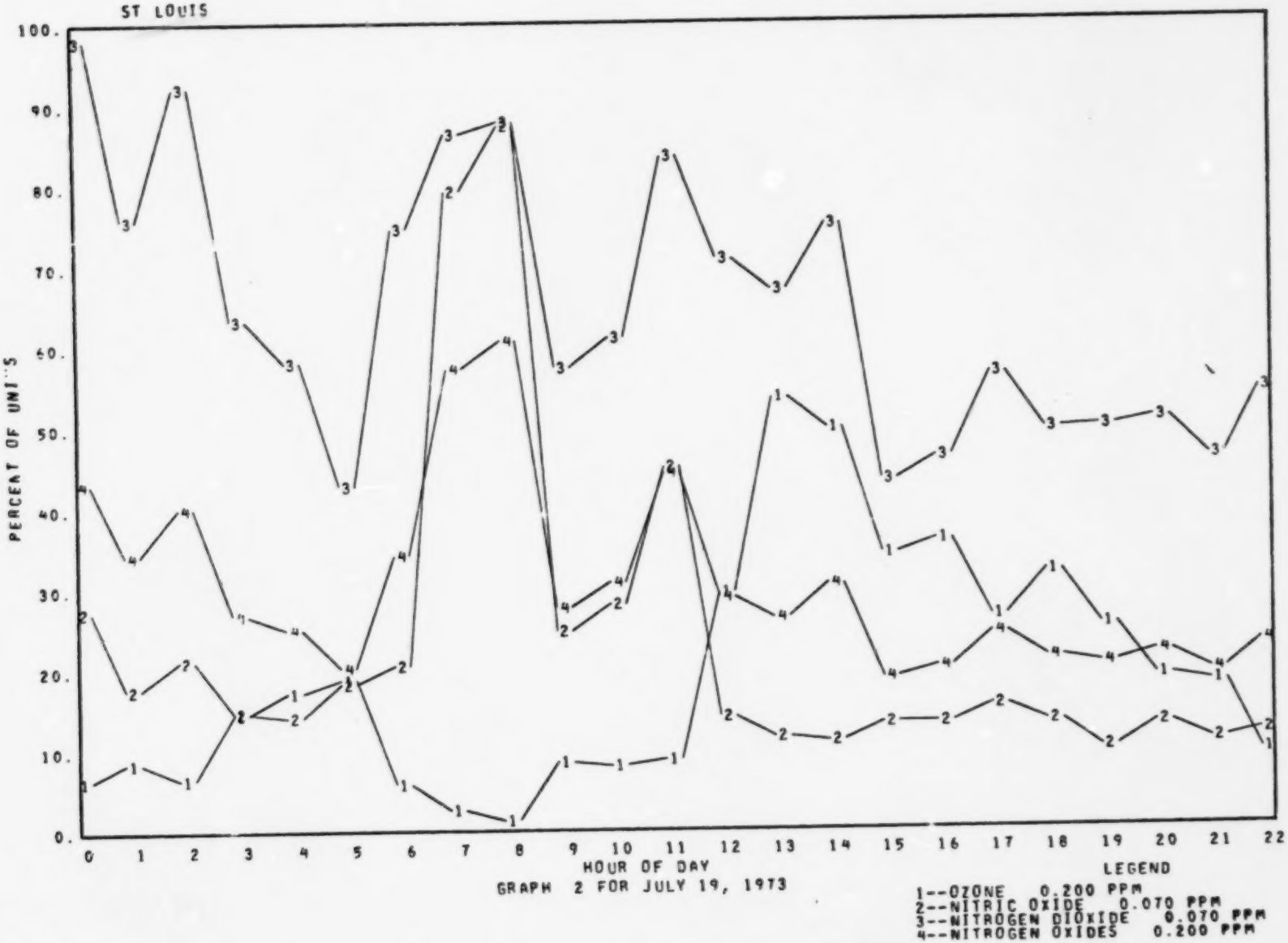


GRAPH 3 FOR JULY 18, 1973

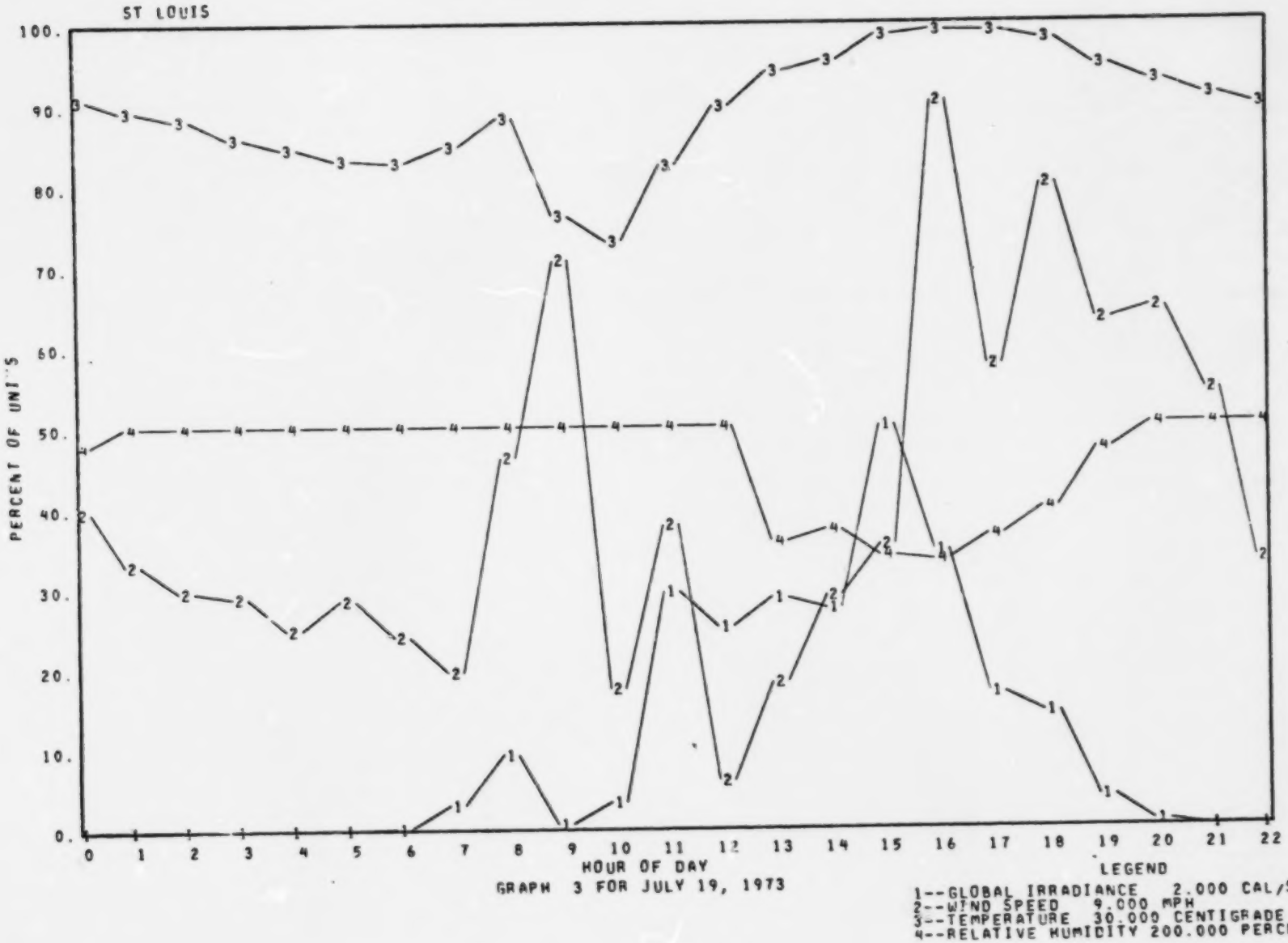

ST LOUIS JULY 18, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES



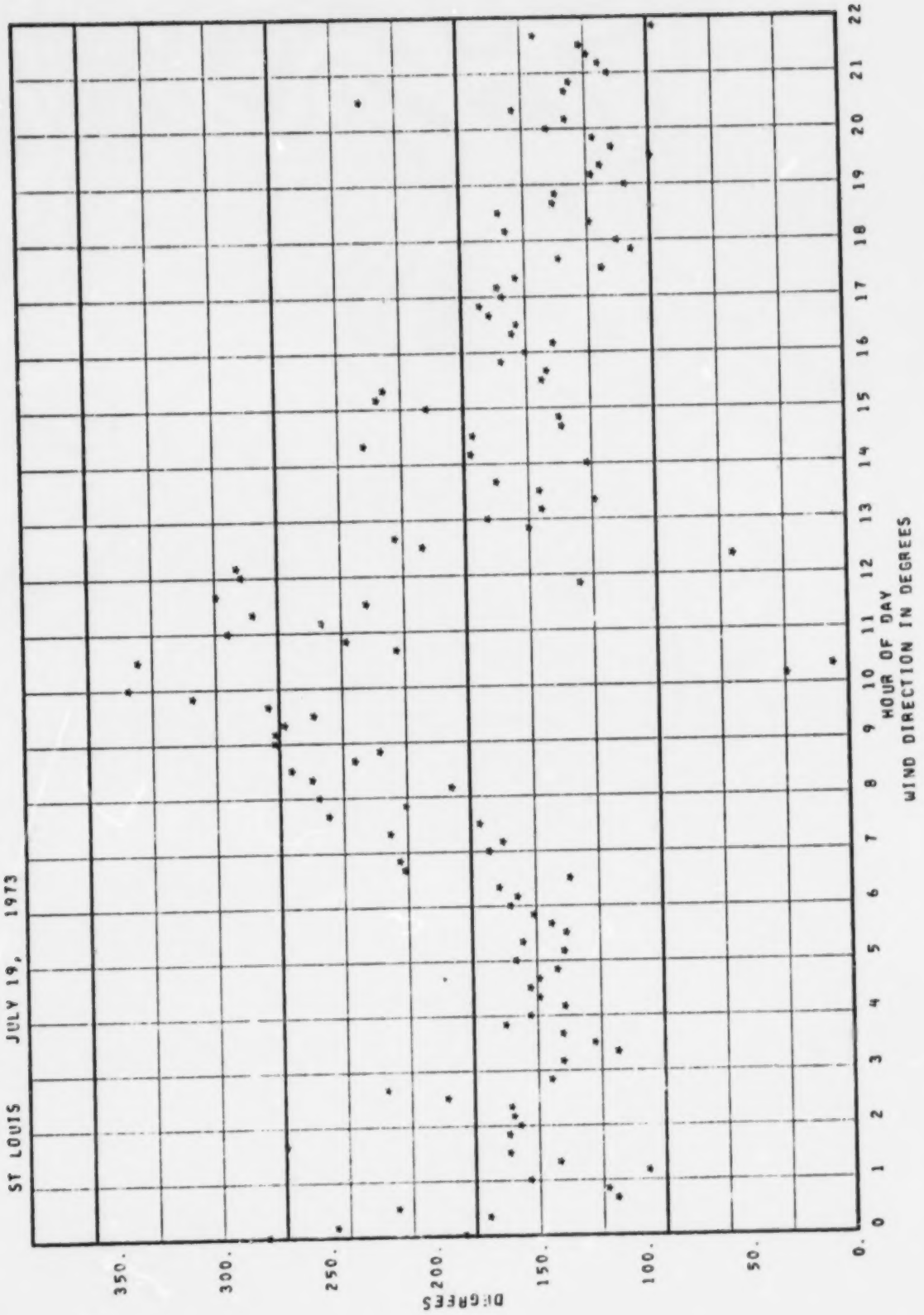
GRAPH 1 FOR JULY 19, 1973

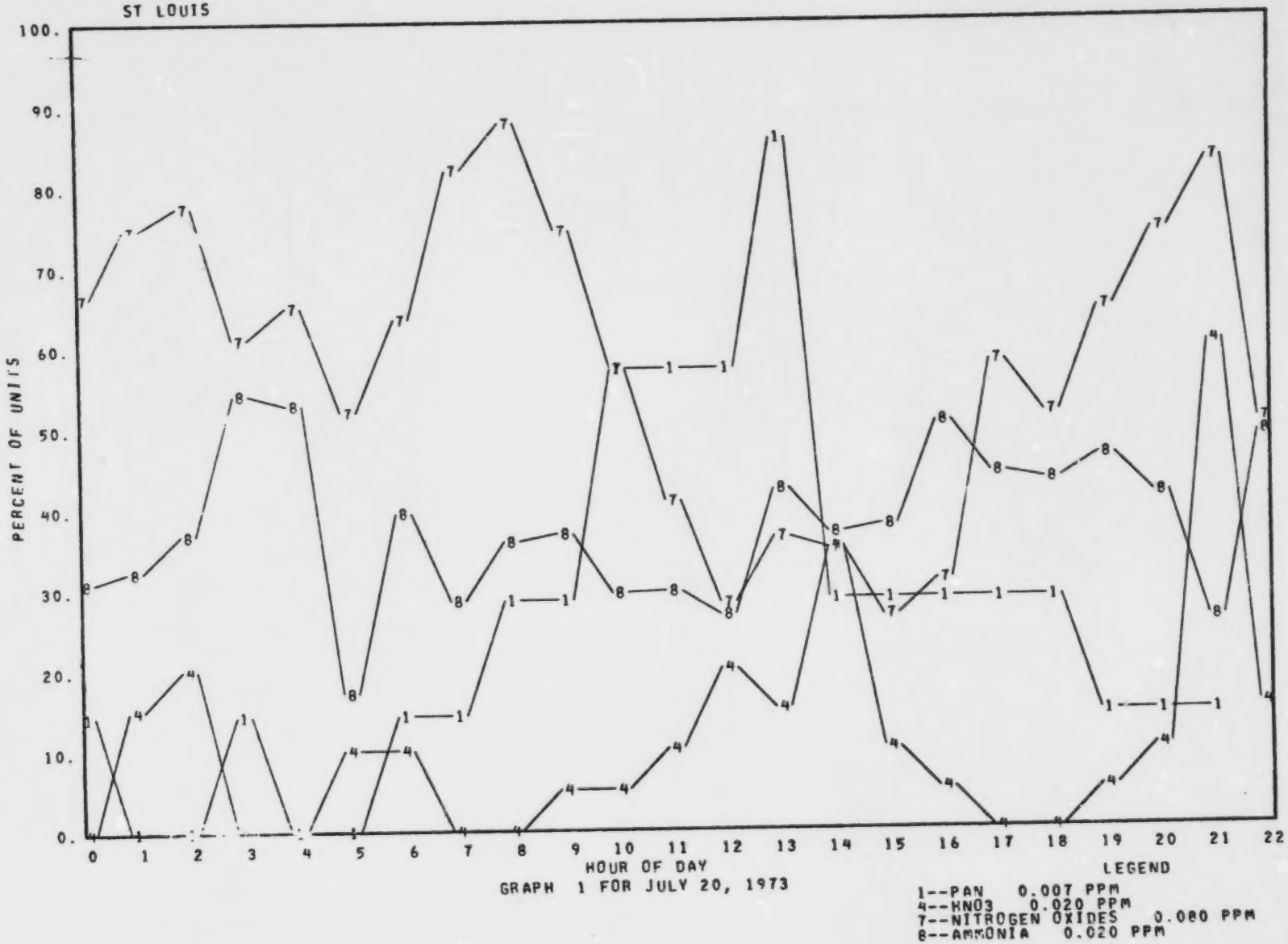


GRAPH 2 FOR JULY 19, 1973

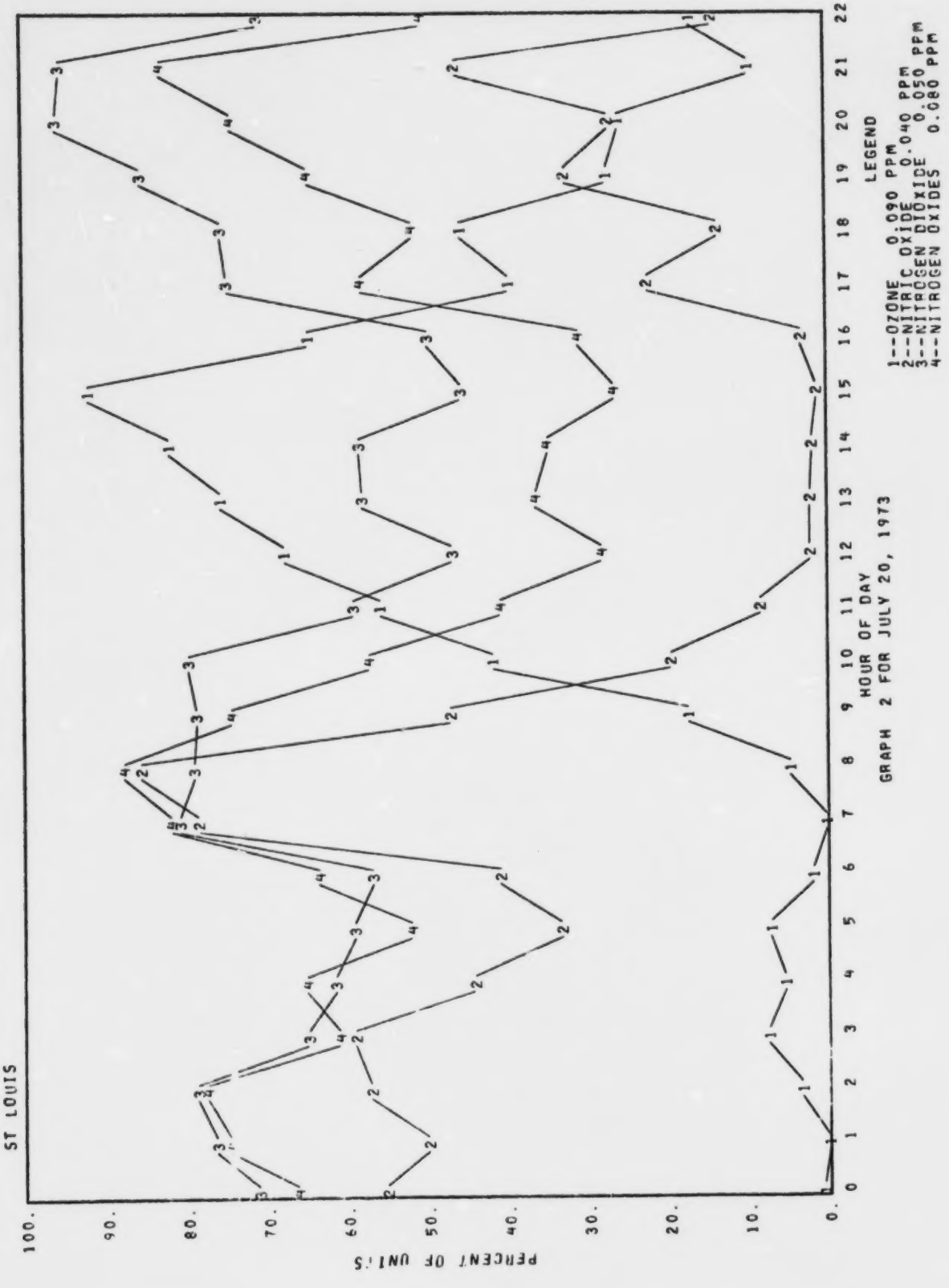


GRAPH 3 FOR JULY 19, 1973

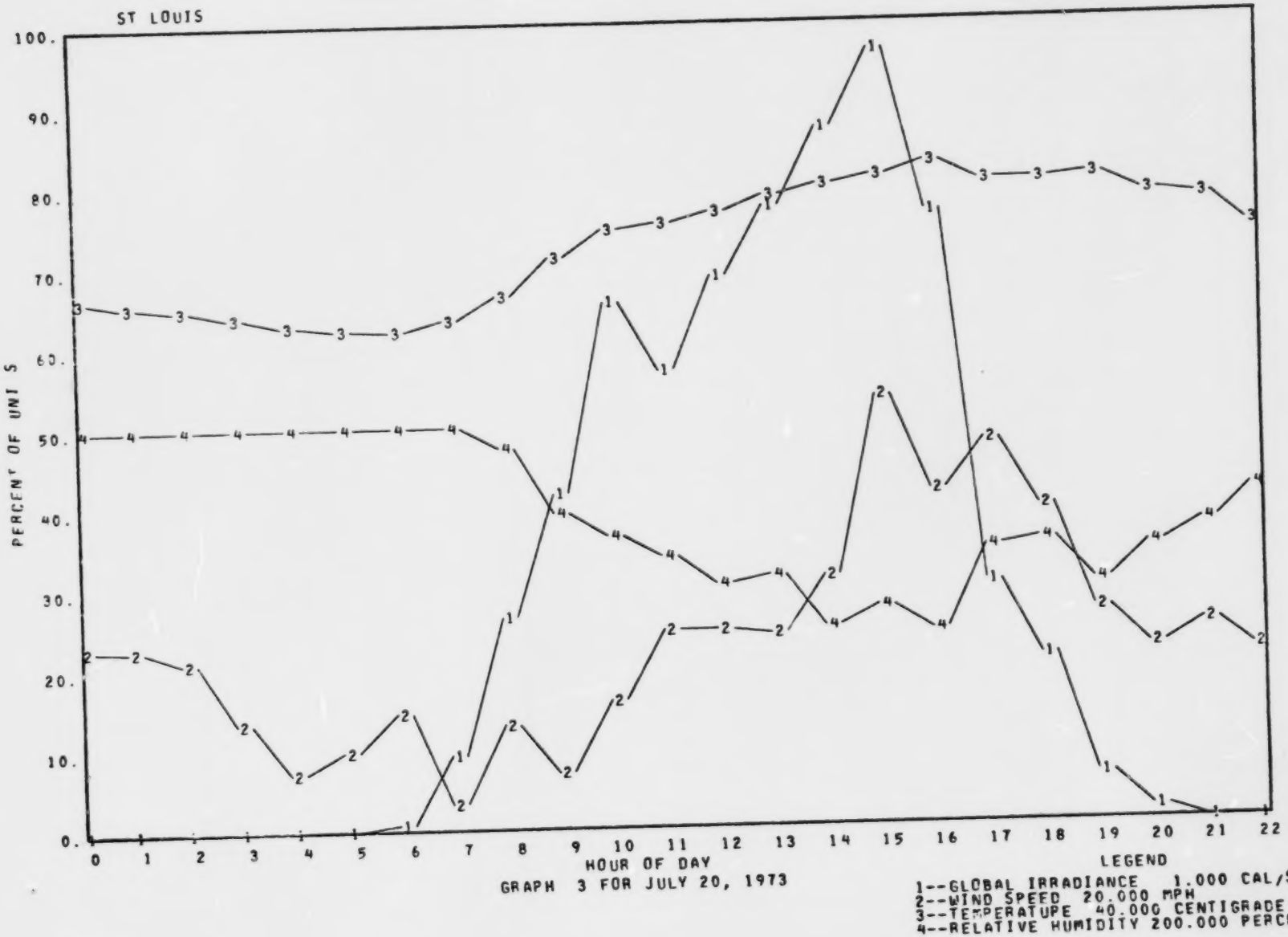

ST LOUIS JULY 19, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
0.
50.
100.
150.
200.
250.
300.
350.

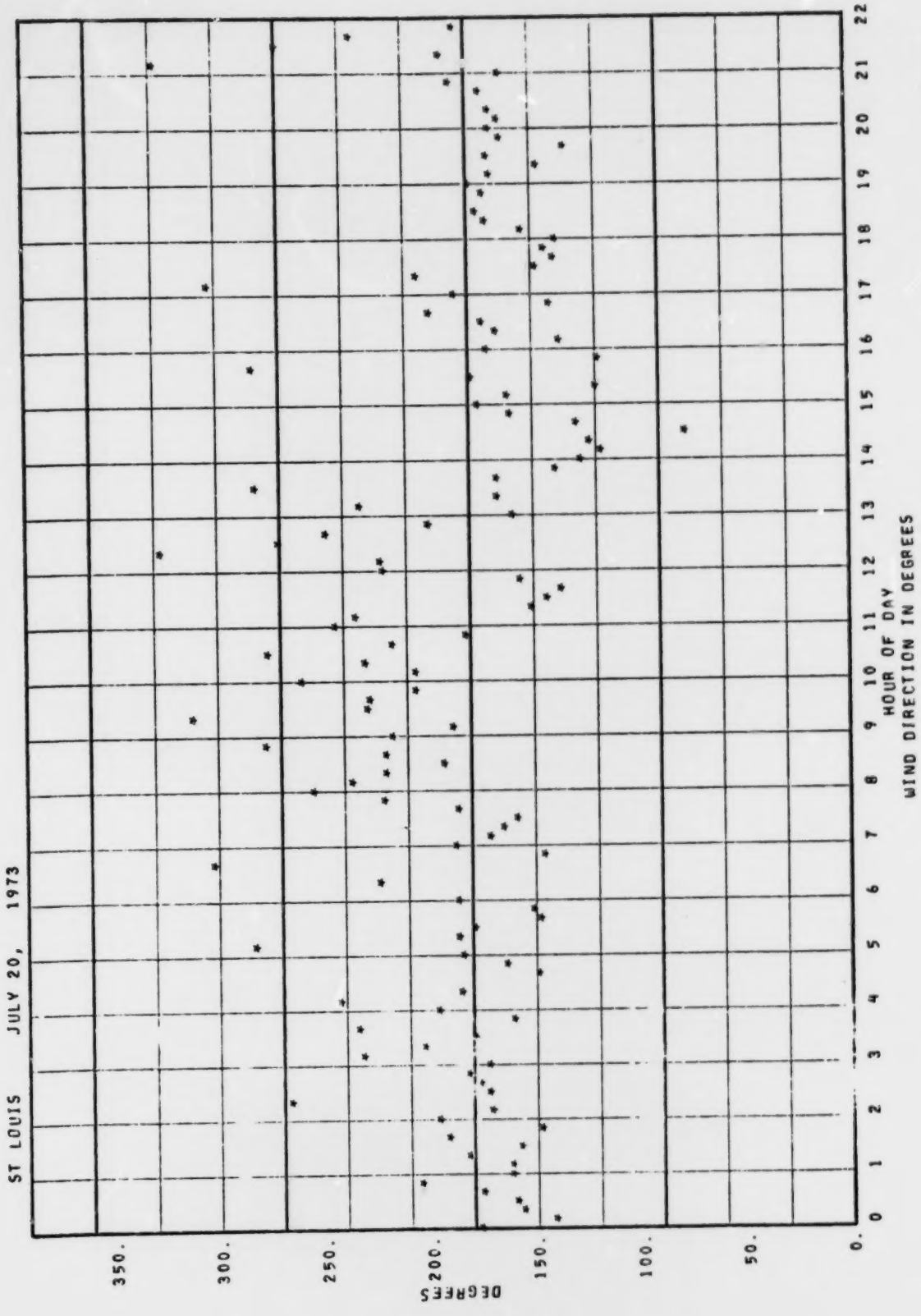


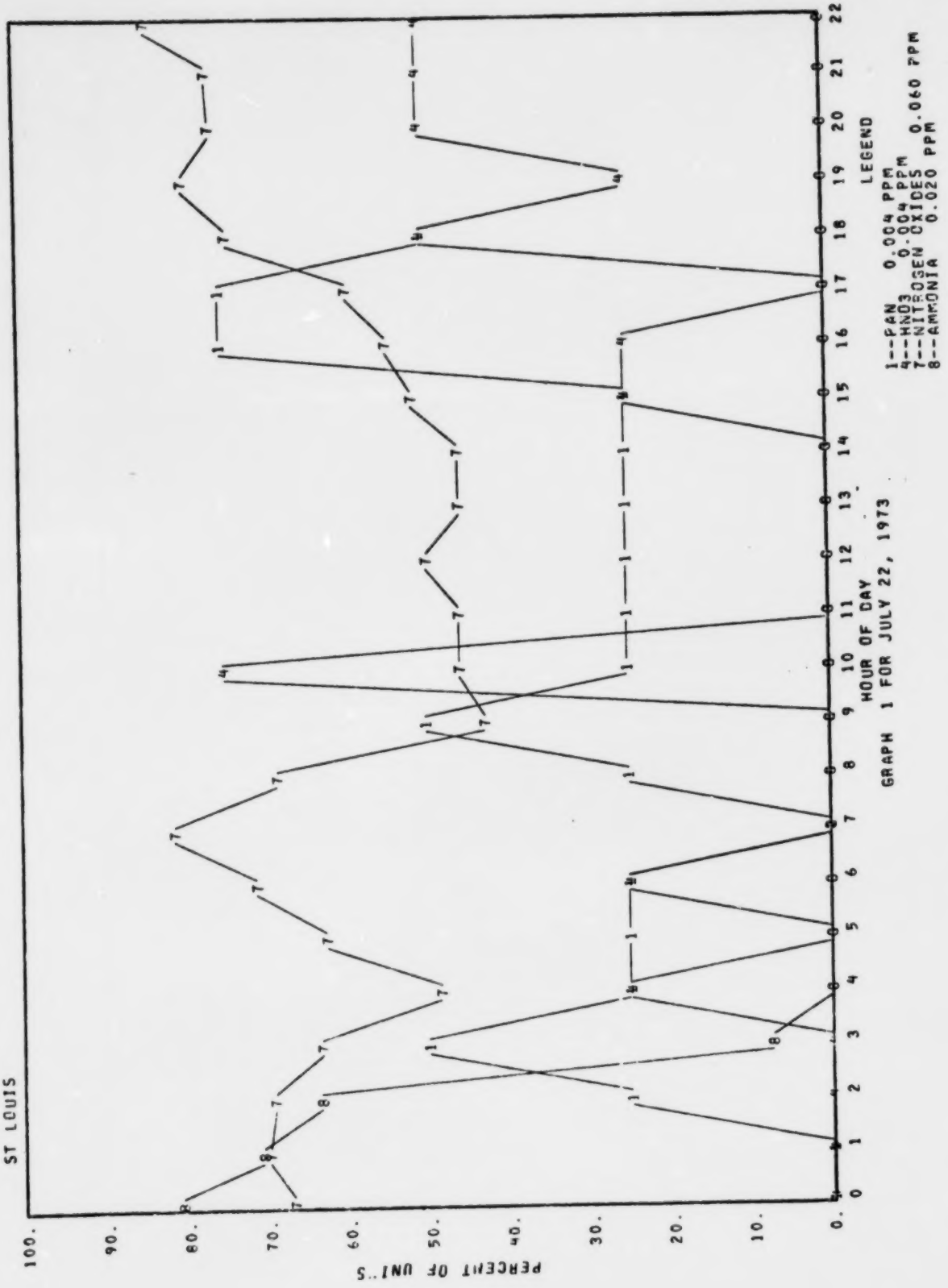
GRAPH 1 FOR JULY 20, 1973



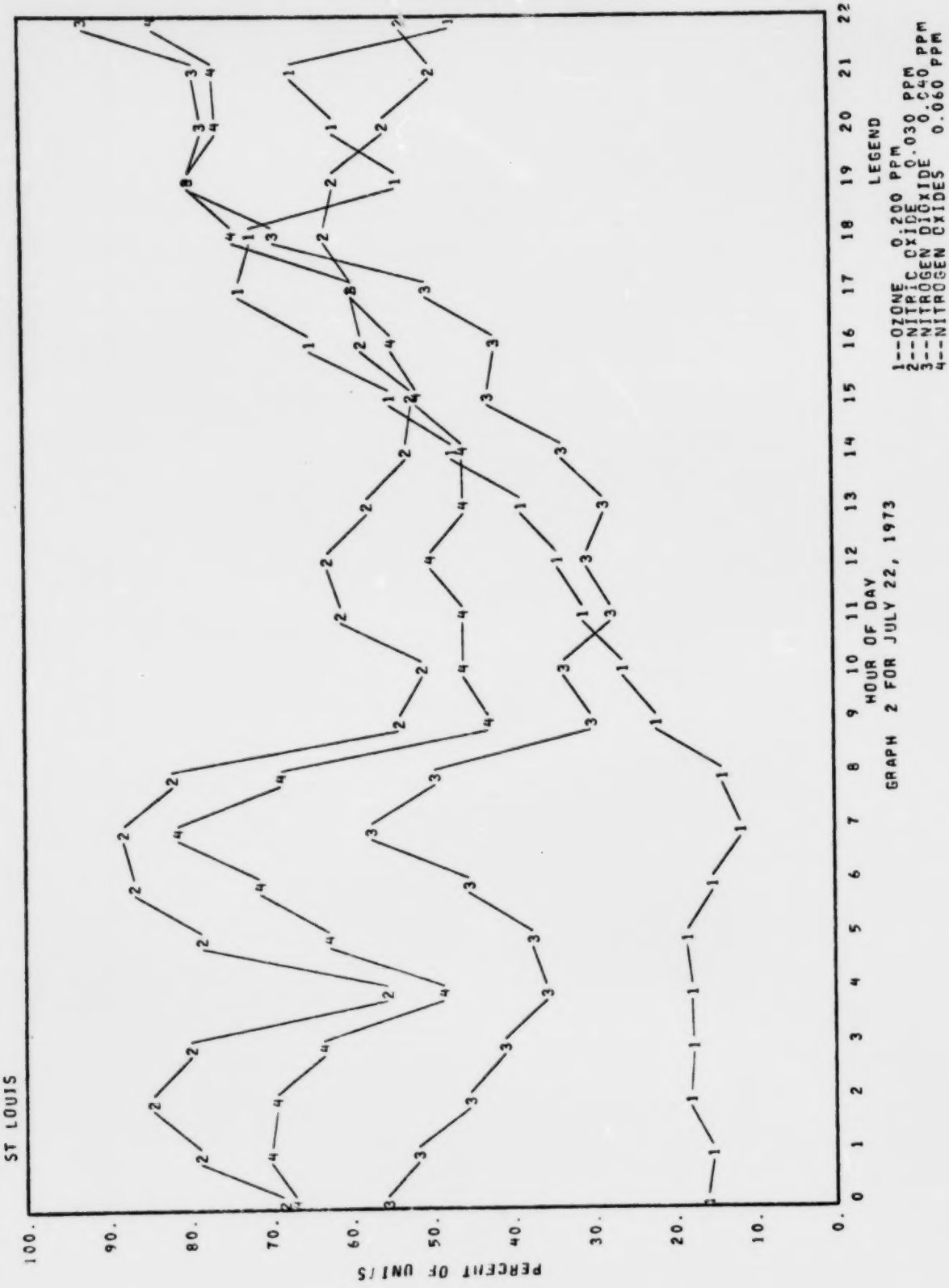
GRAPH 2 FOR JULY 20, 1973


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR JULY 20, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MI
2--WIND SPEED 20.000 MPH
3--TEMPERATURE 40.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

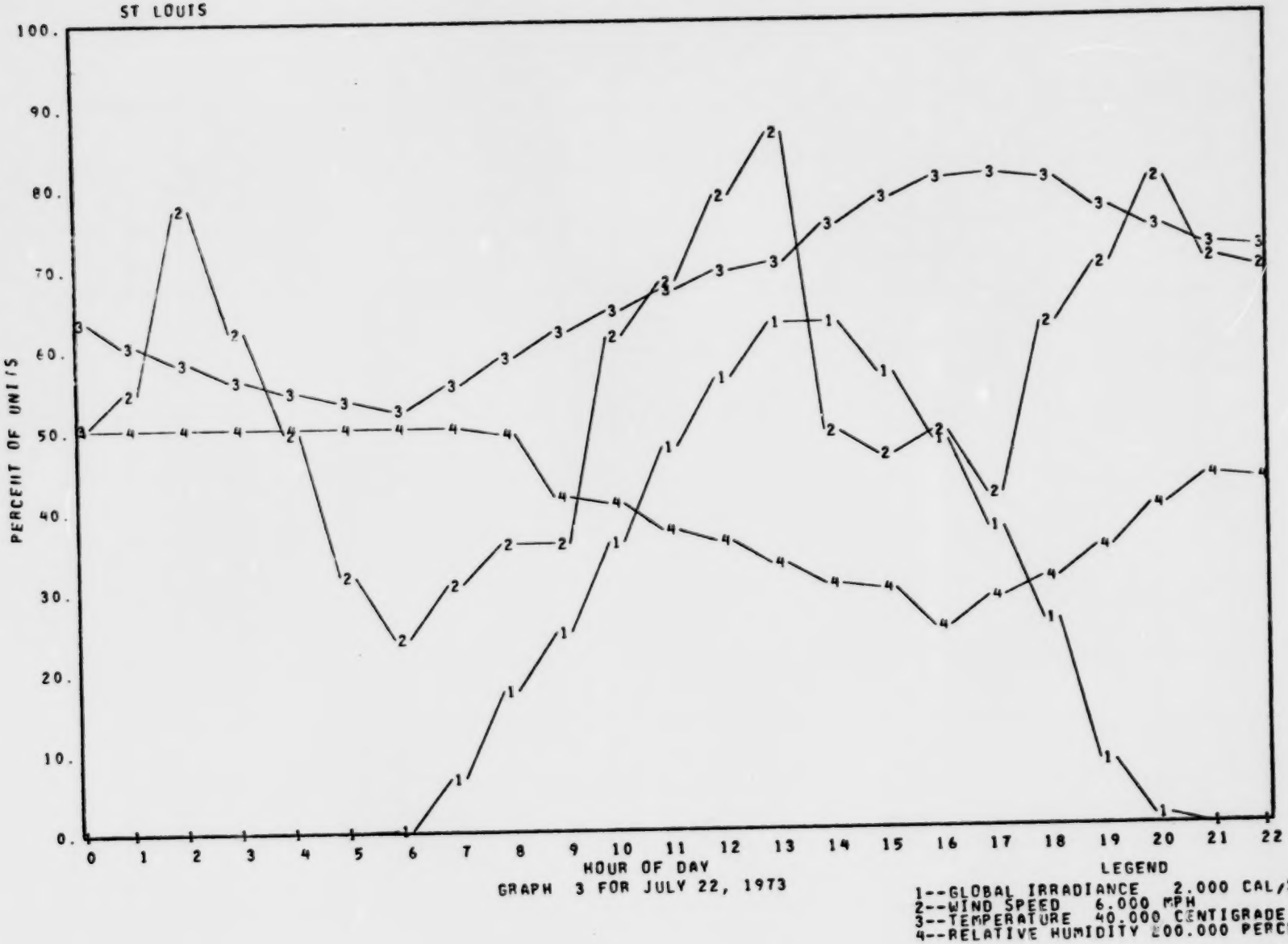

ST LOUIS JULY 20, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



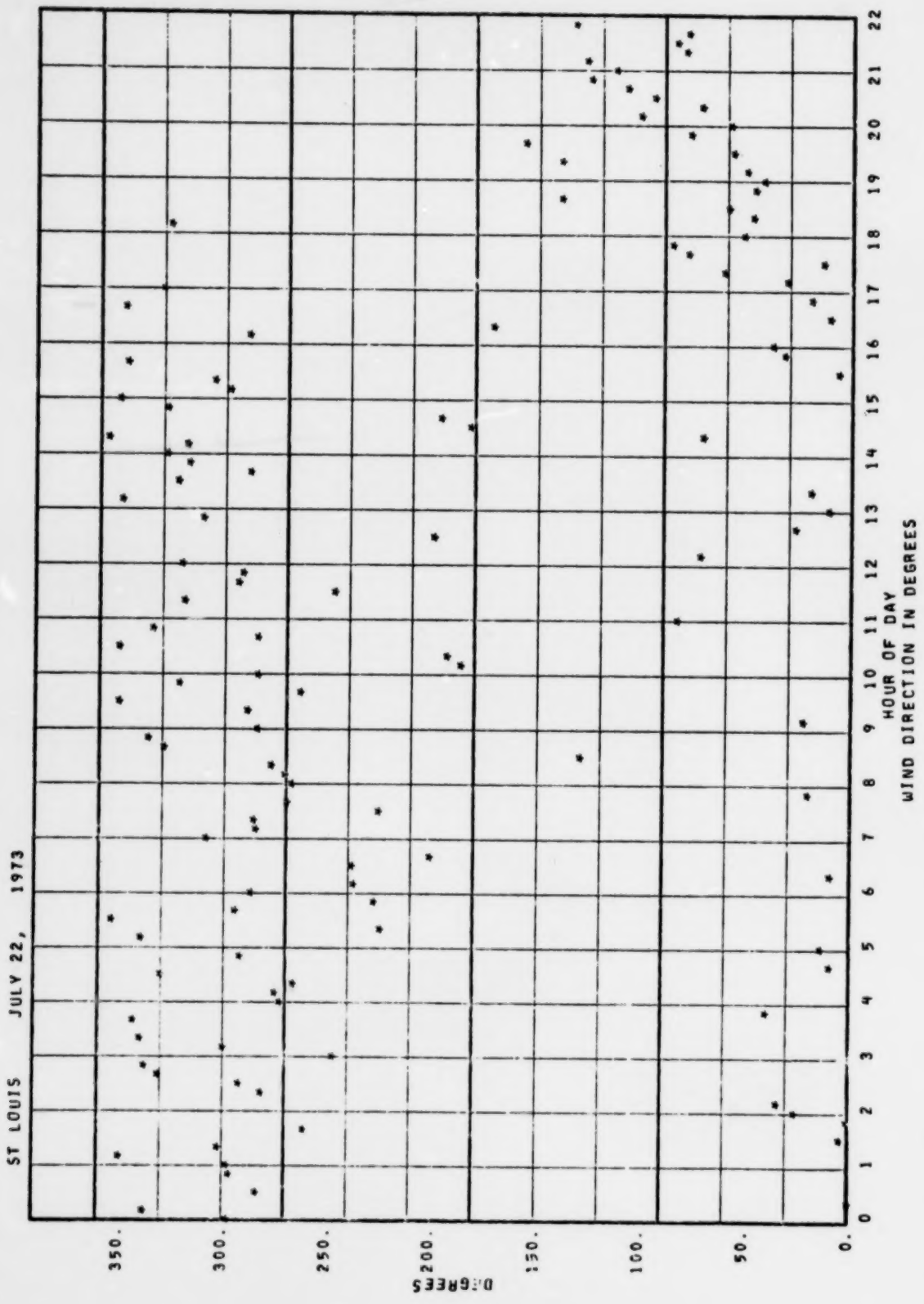
GRAPH 1 FOR JULY 22, 1973

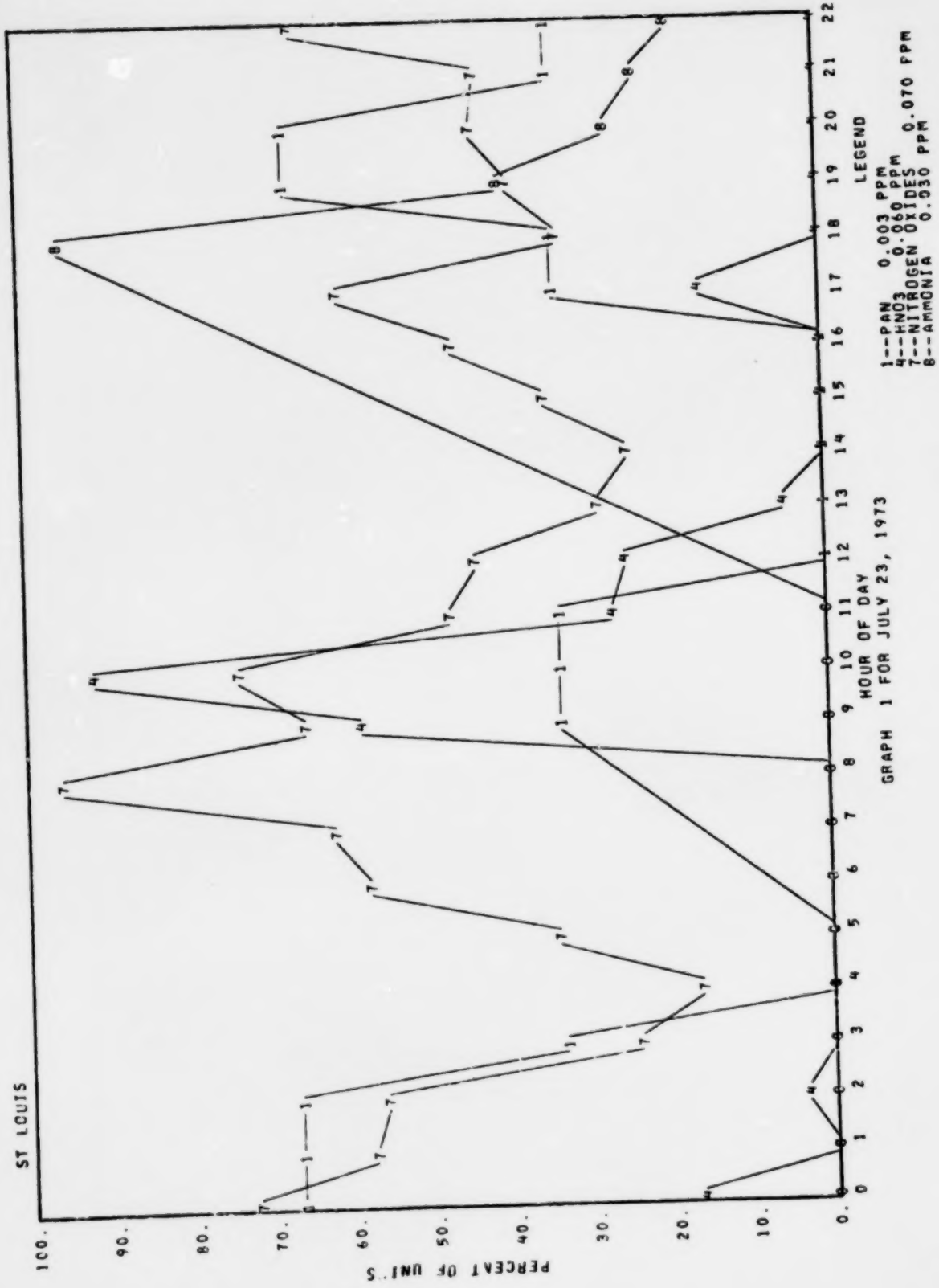


GRAPH 2 FOR JULY 22, 1973

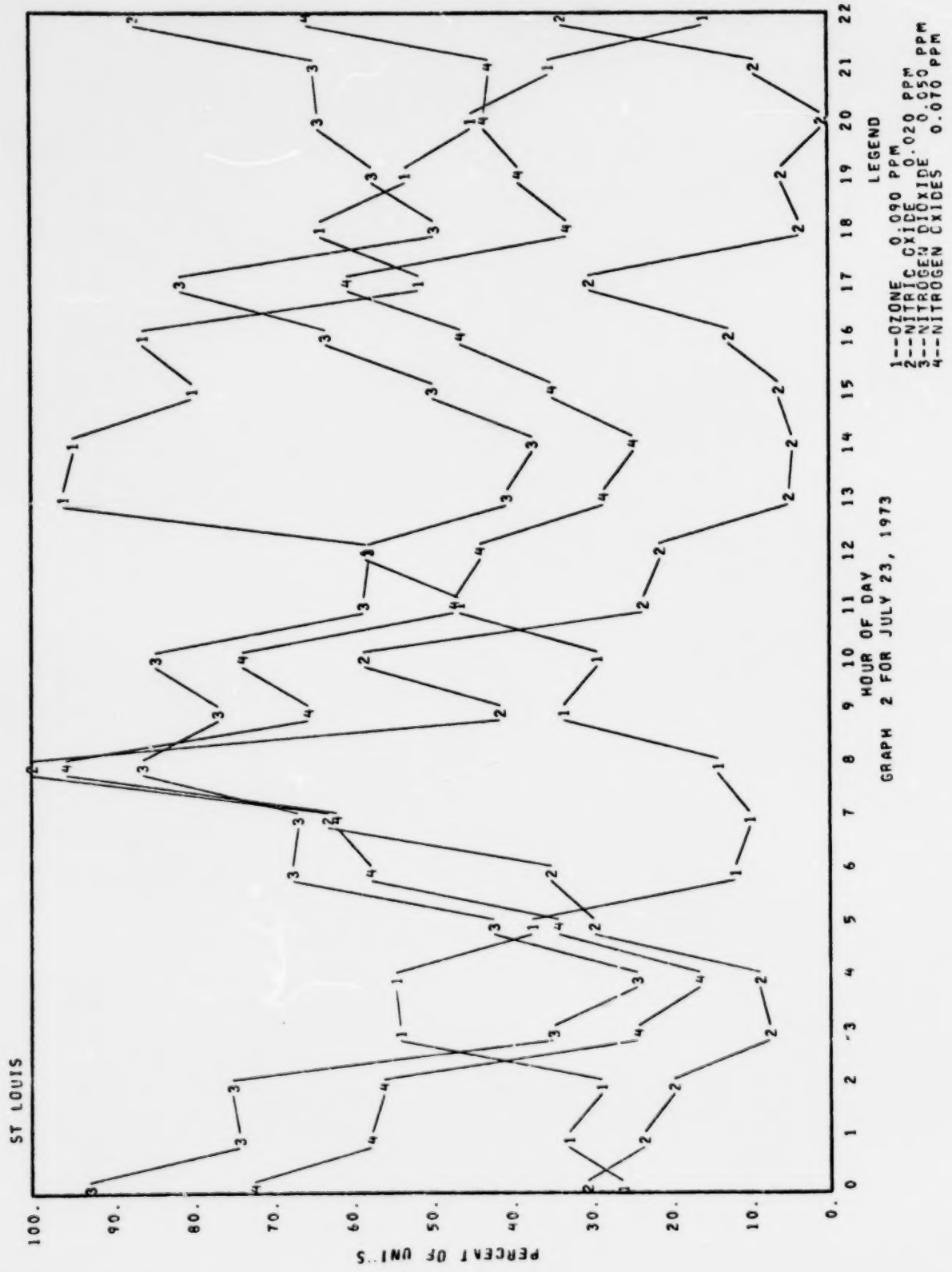


GRAPH 3 FOR JULY 22, 1973

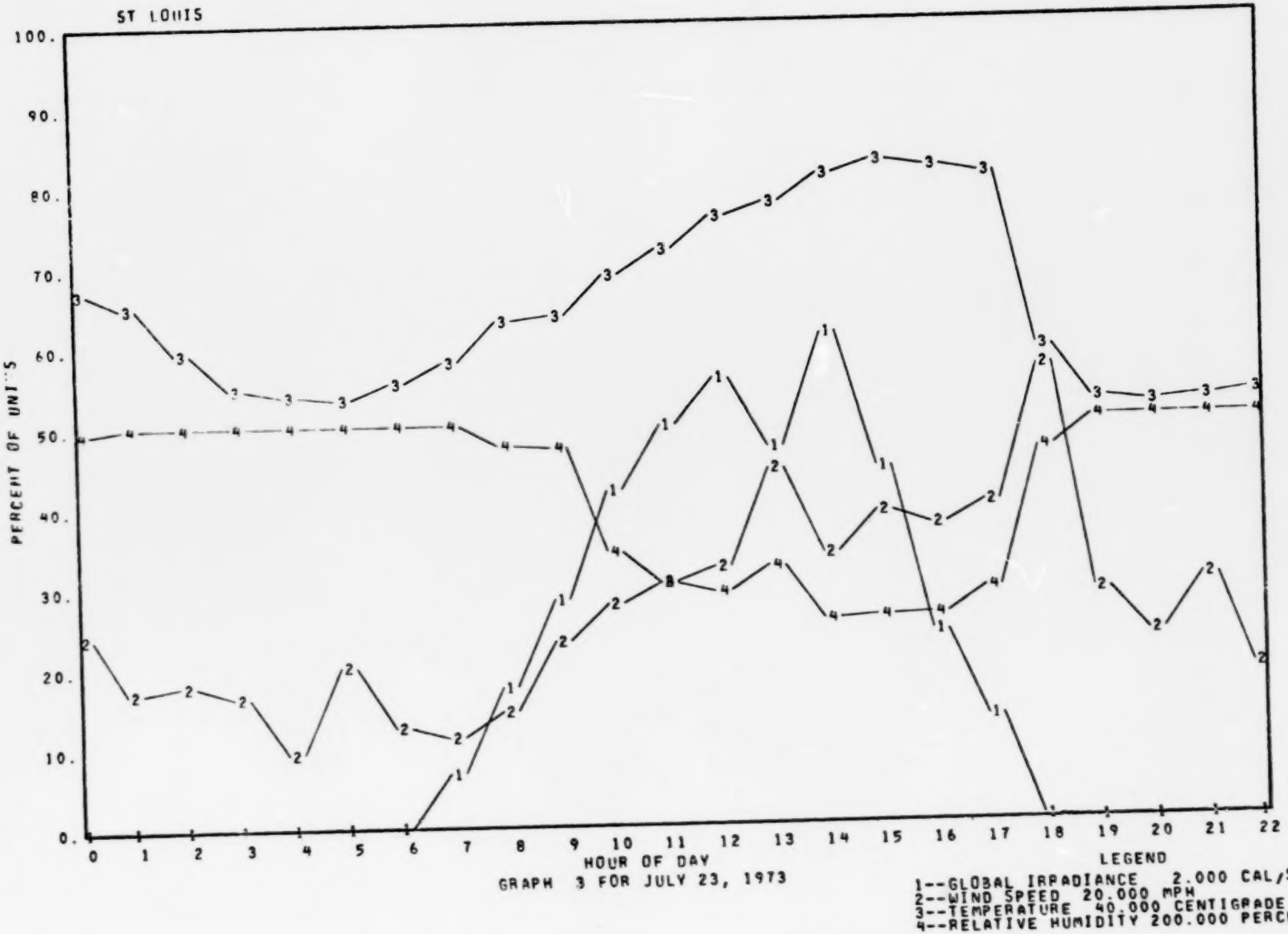

ST LOUIS JULY 22, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES



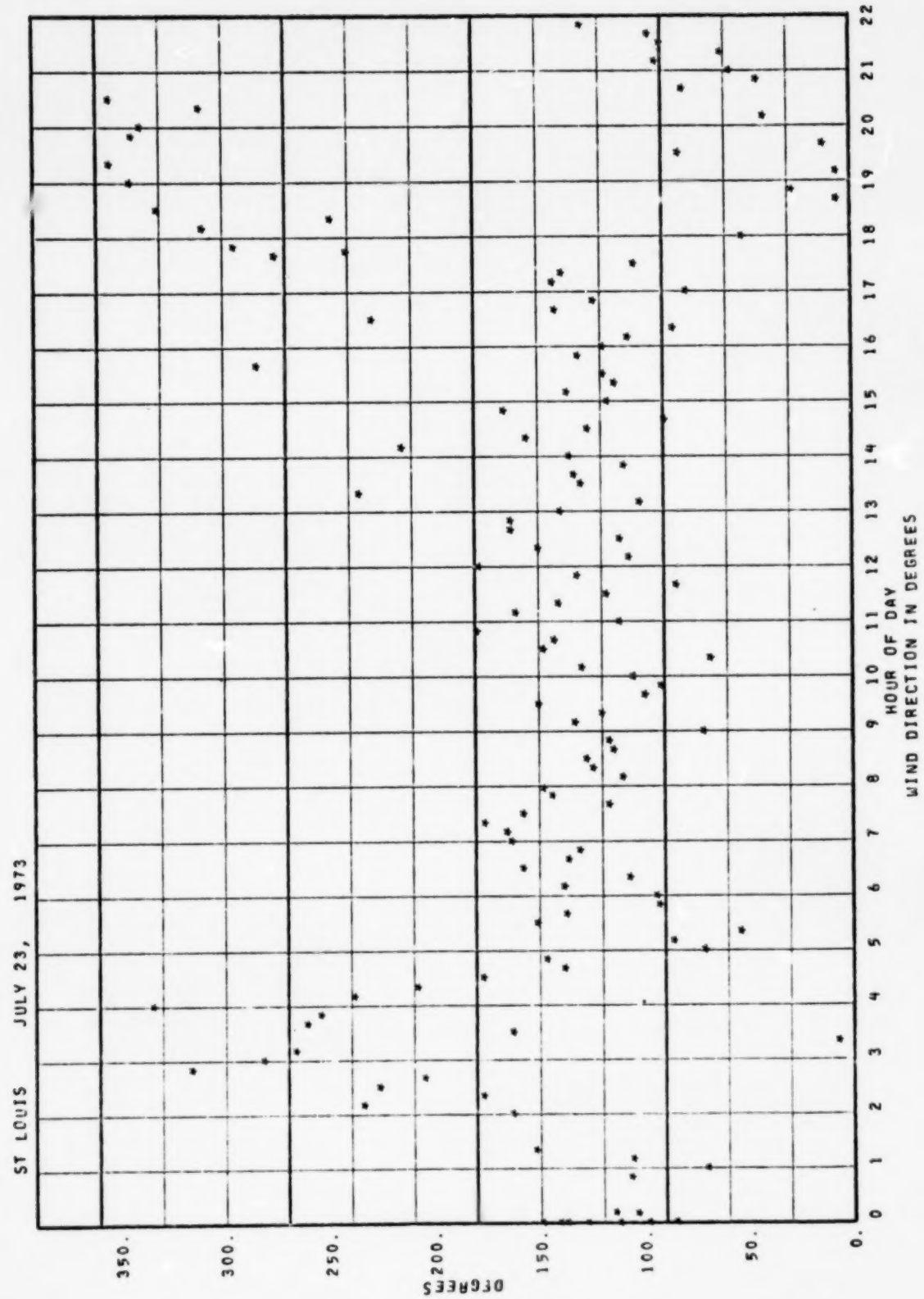
GRAPH 1 FOR JULY 23, 1973

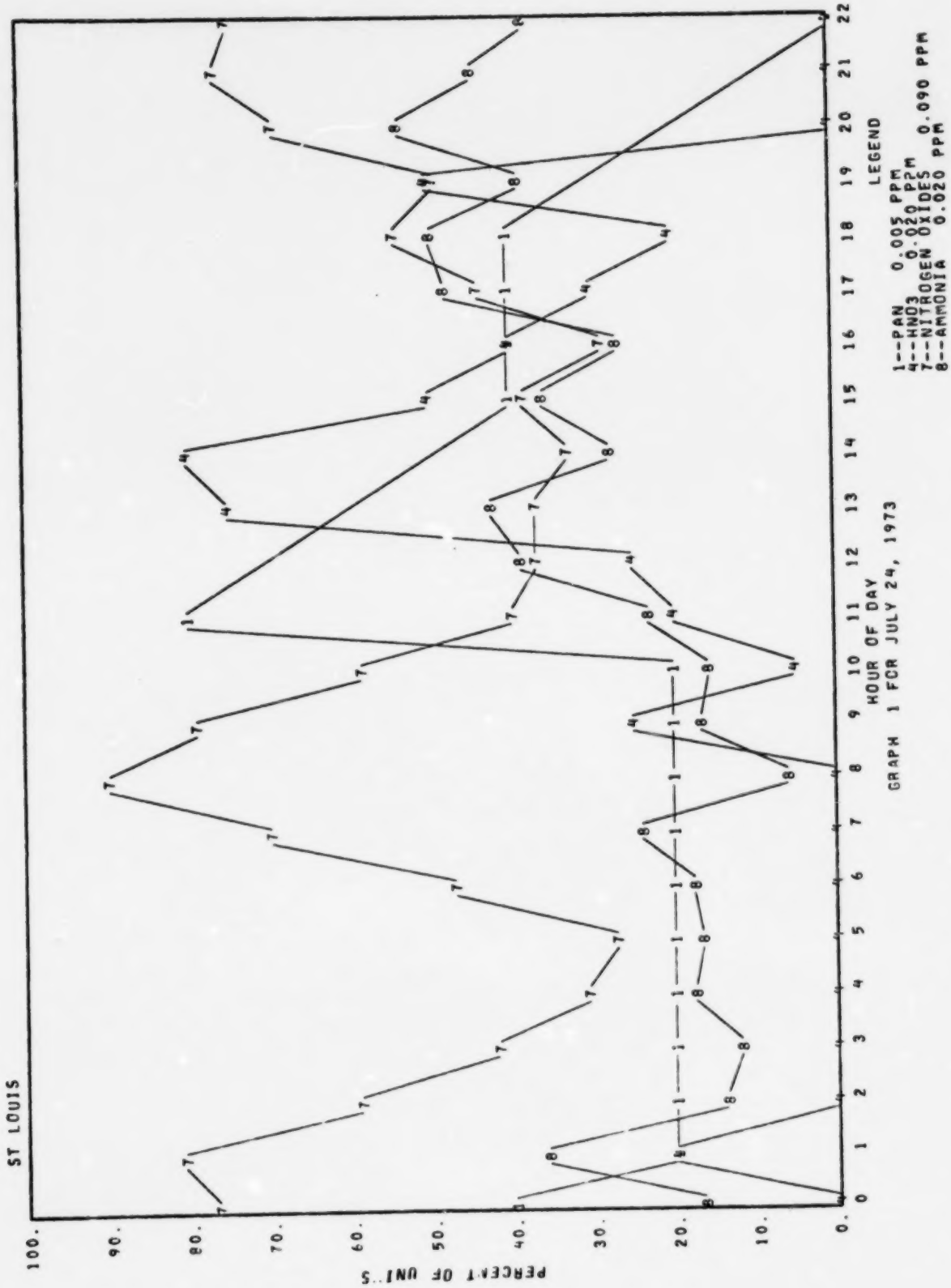


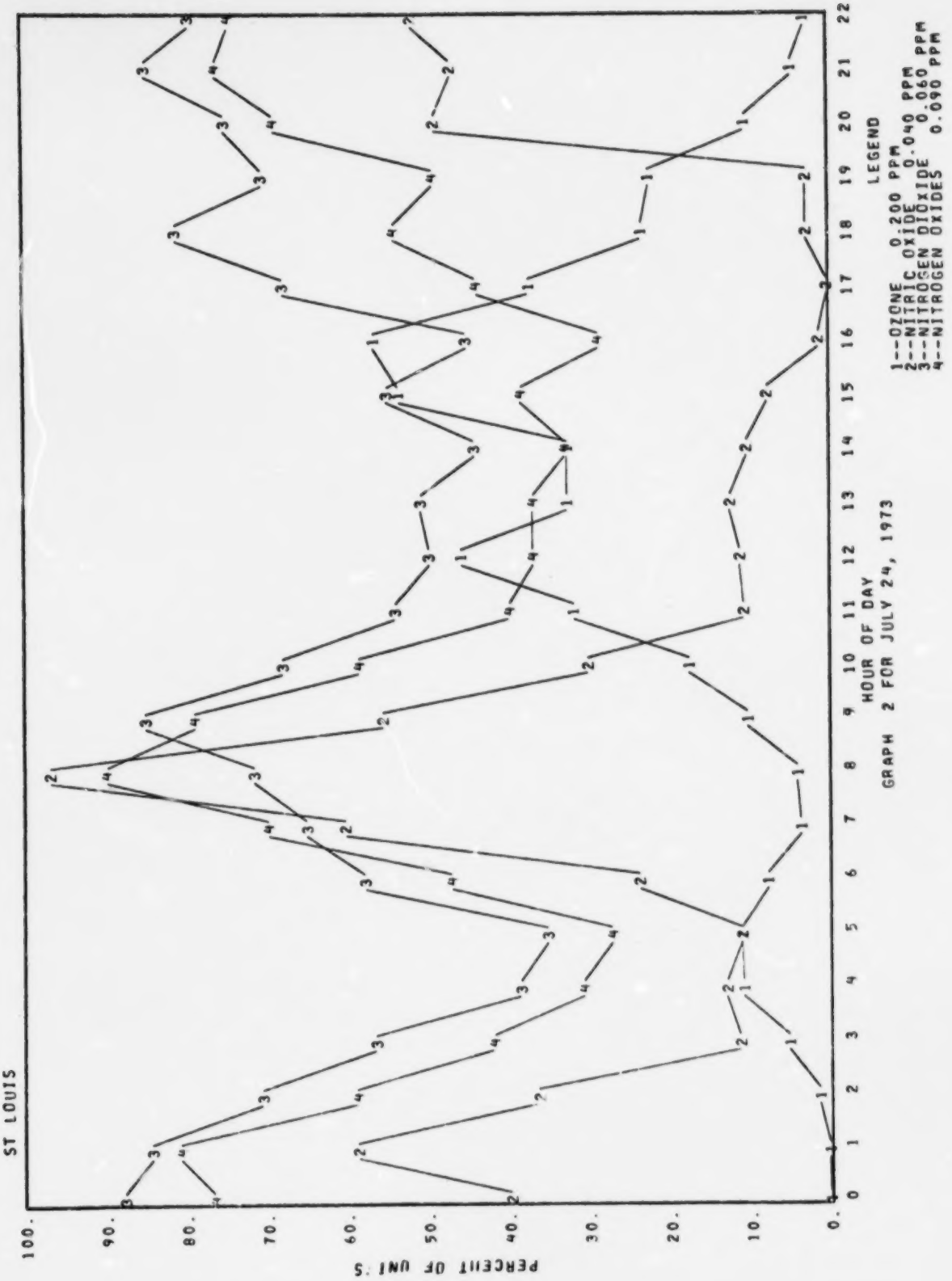
GRAPH 2 FOR JULY 23, 1973

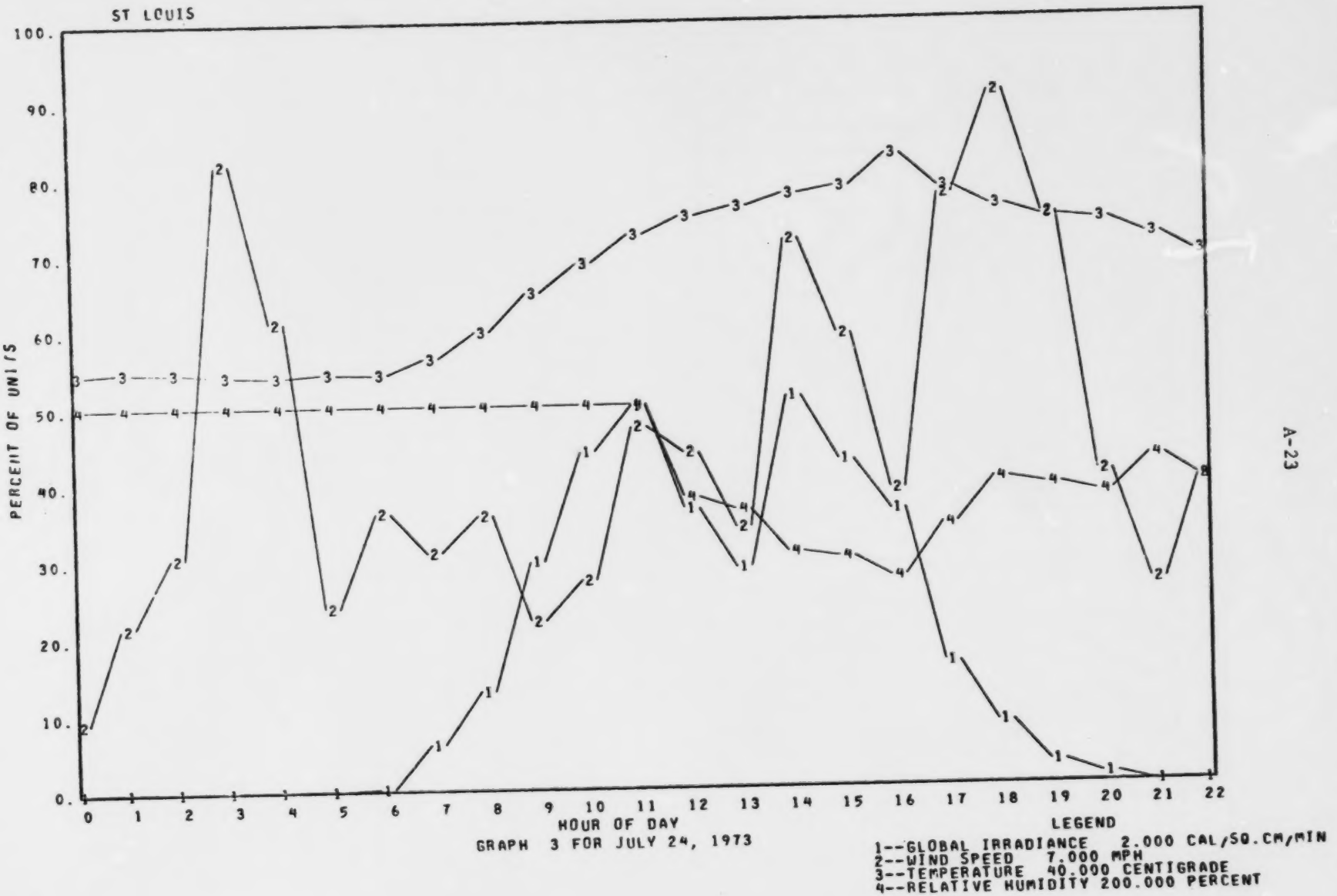


GRAPH 3 FOR JULY 23, 1973

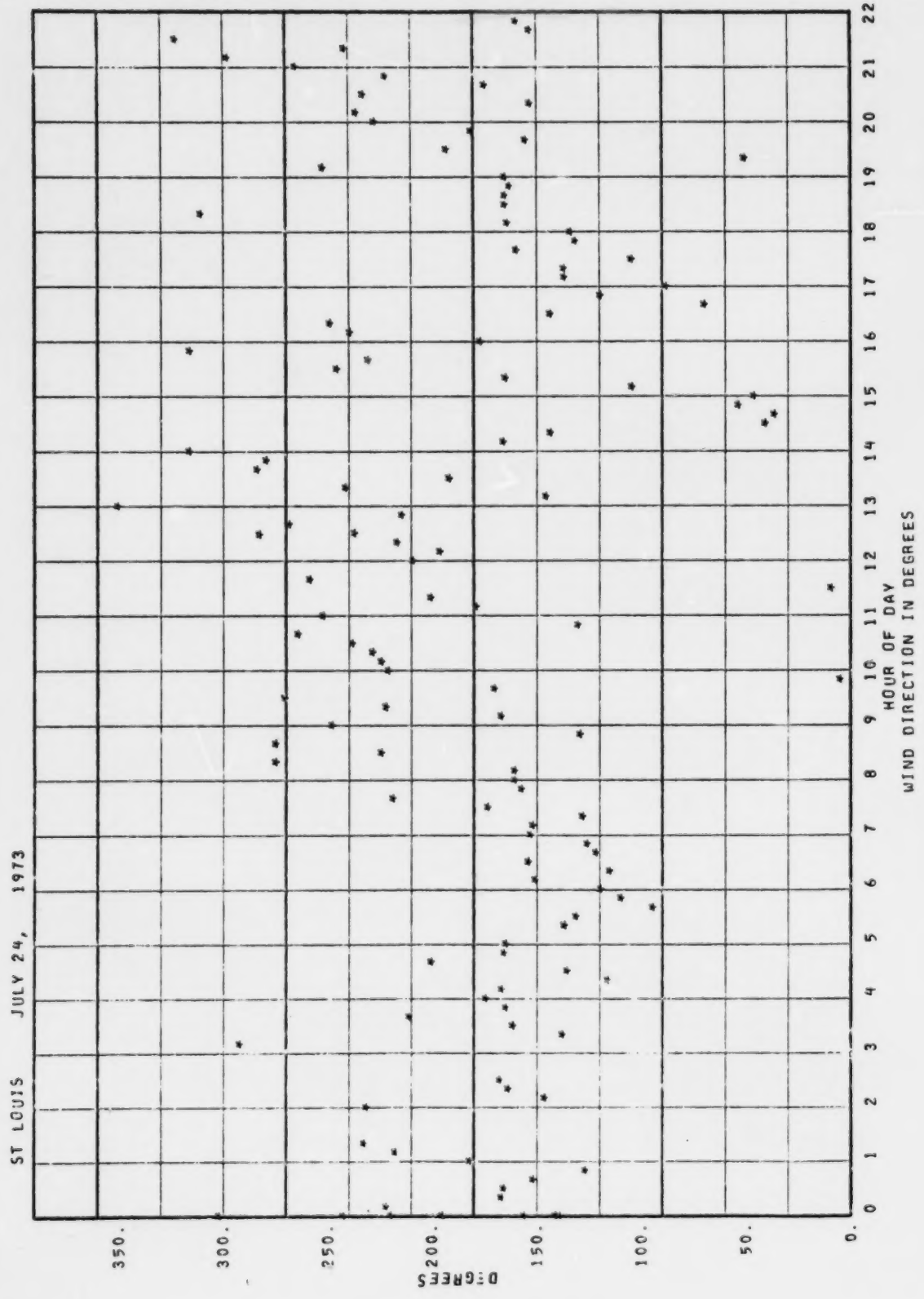

ST LOUIS JULY 23, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

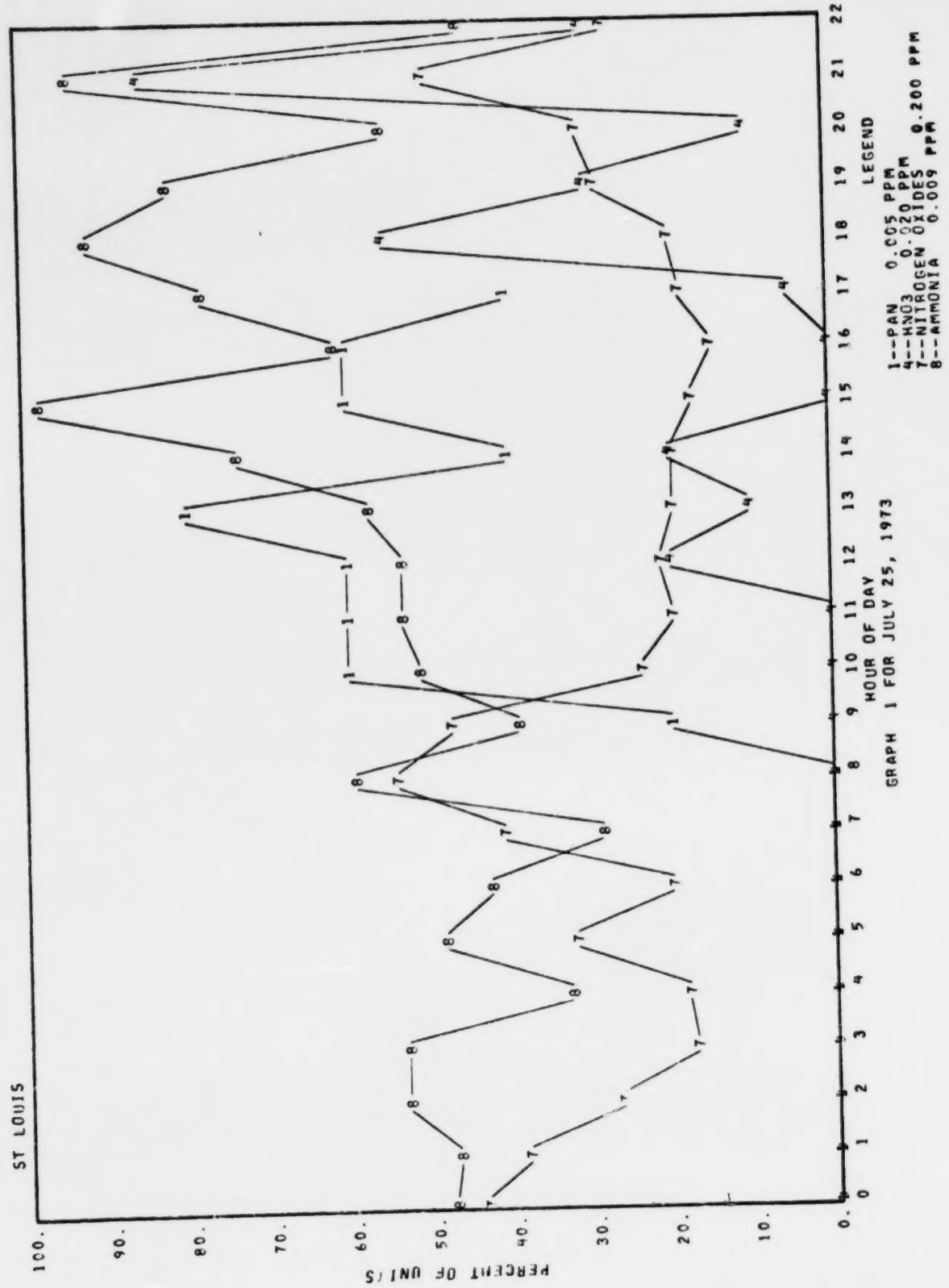

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR JULY 24, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.090 PPM
8--AMMONIA 0.020 PPM

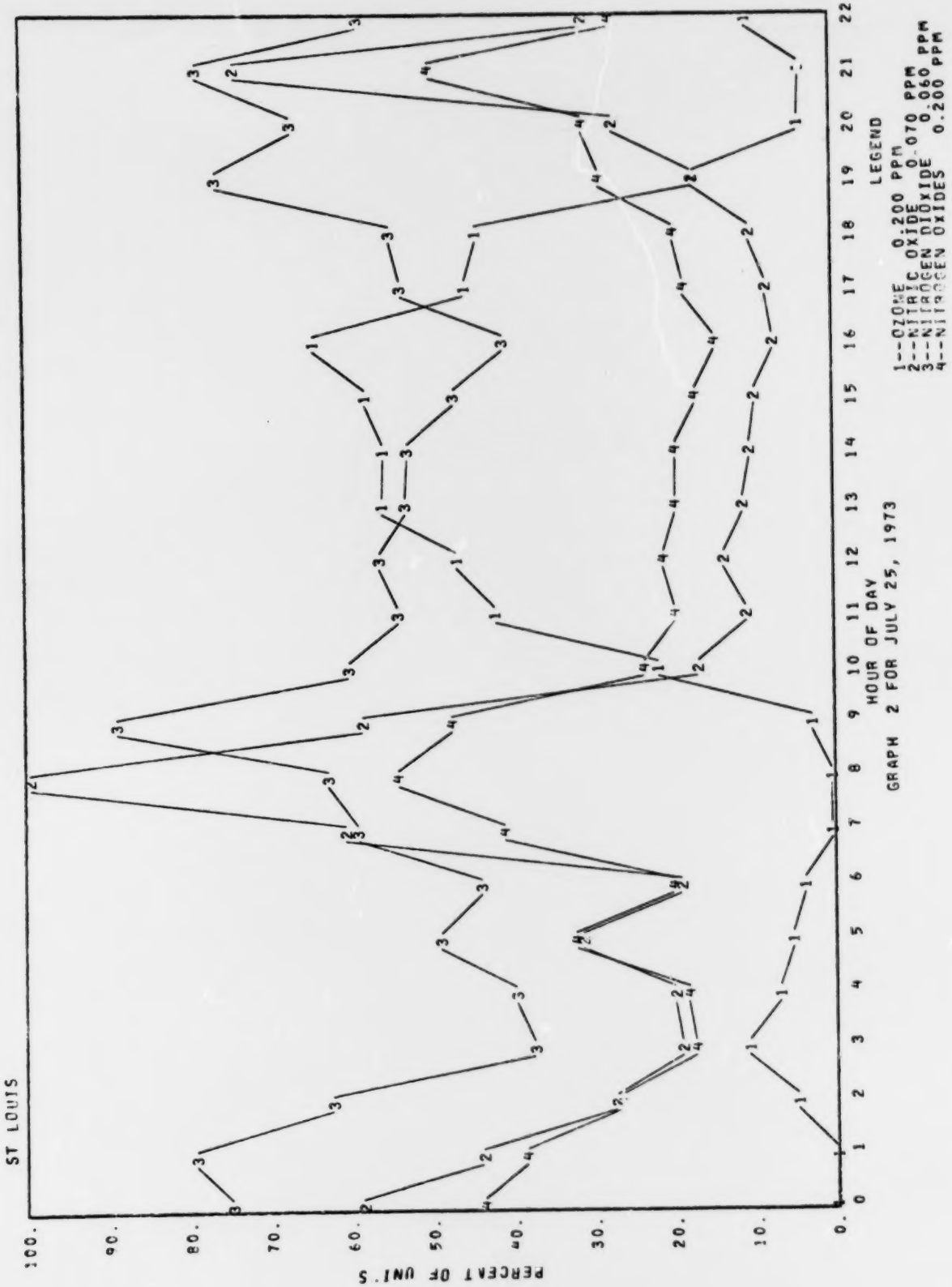

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR JULY 24, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.040 PPM
3--NITROGEN DIOXIDE 0.060 PPM
4--NITROGEN OXIDES 0.090 PPM



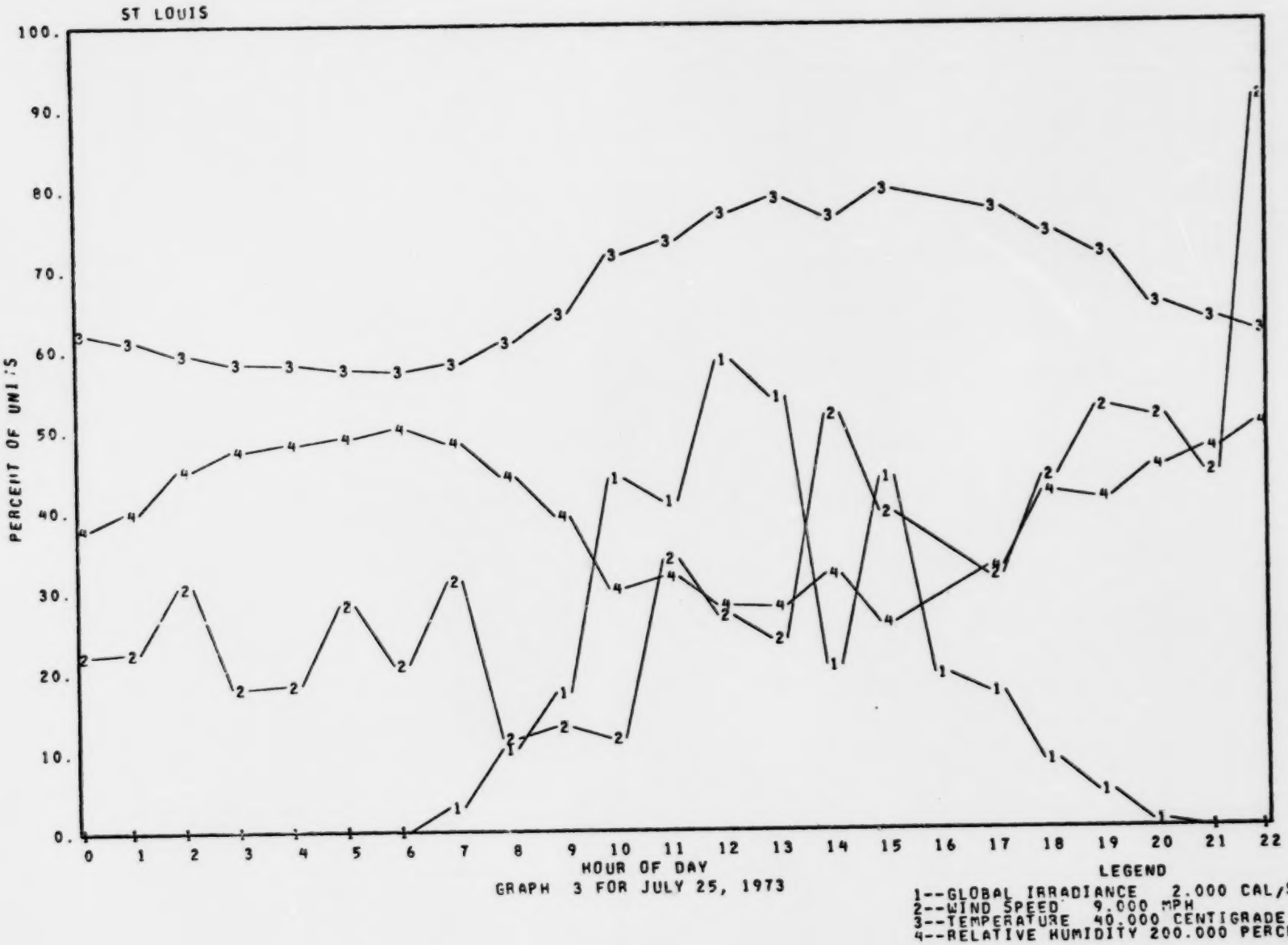
GRAPH 3 FOR JULY 24, 1973


ST LOUIS JULY 24, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

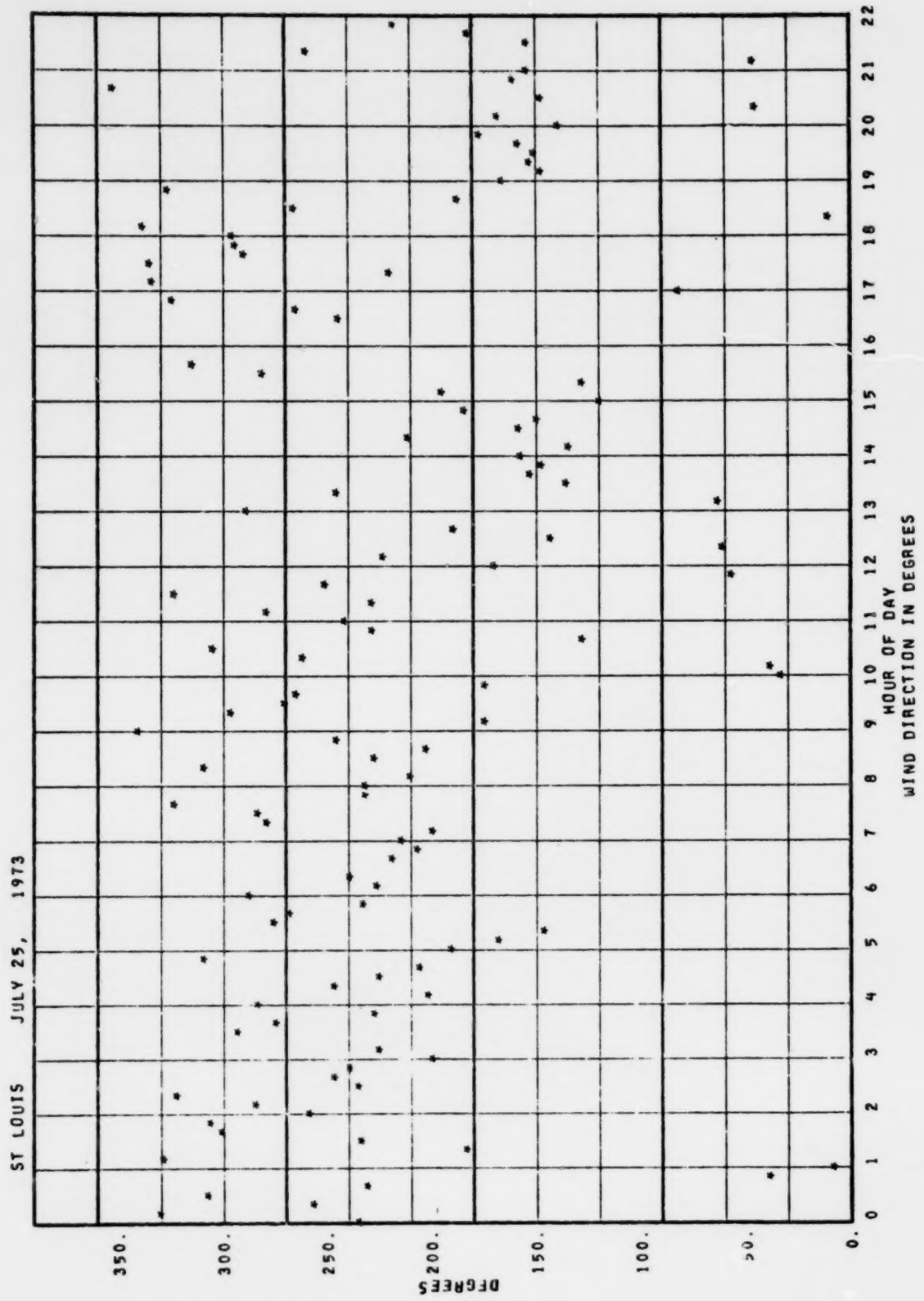

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR JULY 25, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.009 PPM

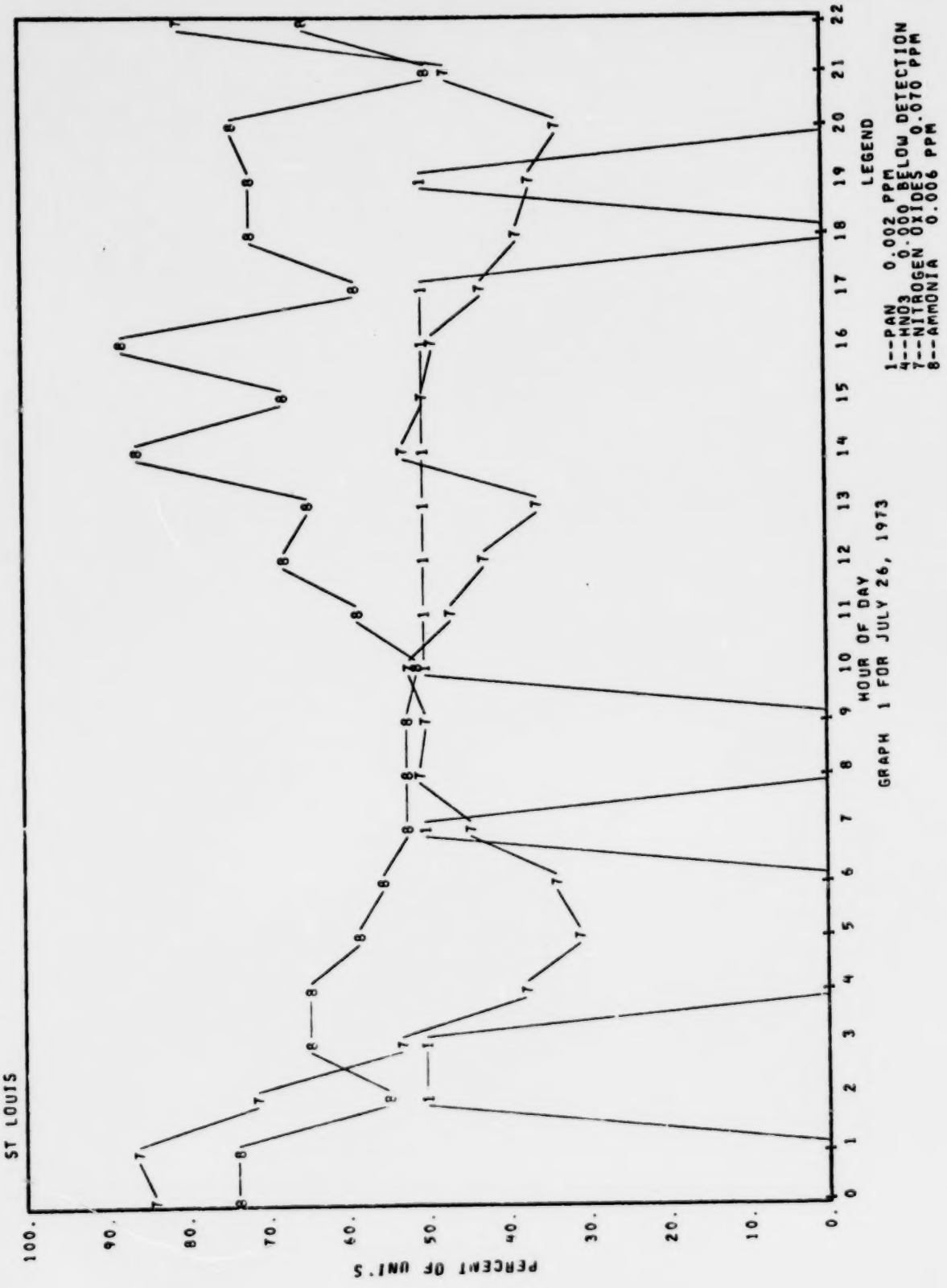


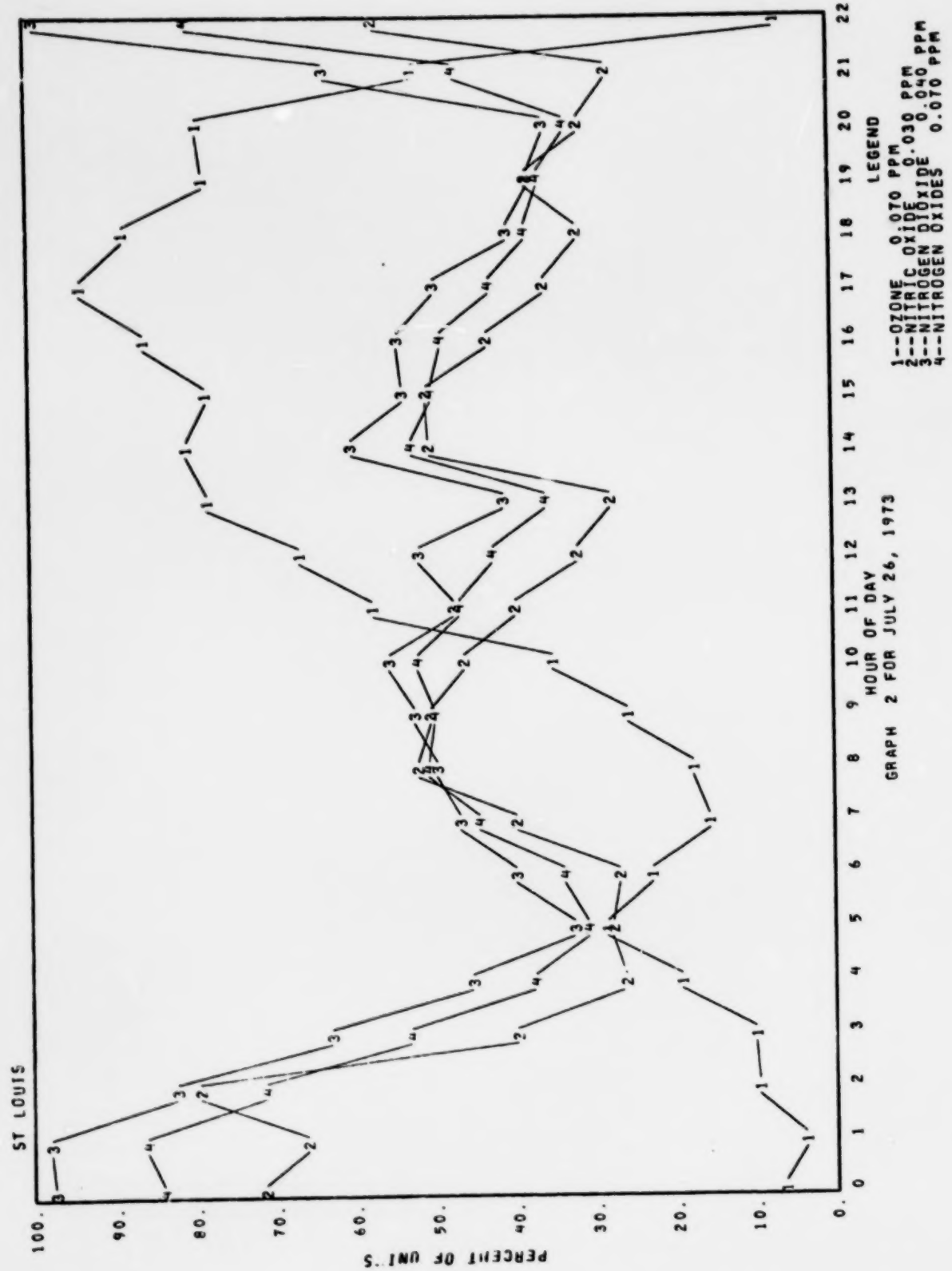
GRAPH 2 FOR JULY 25, 1973



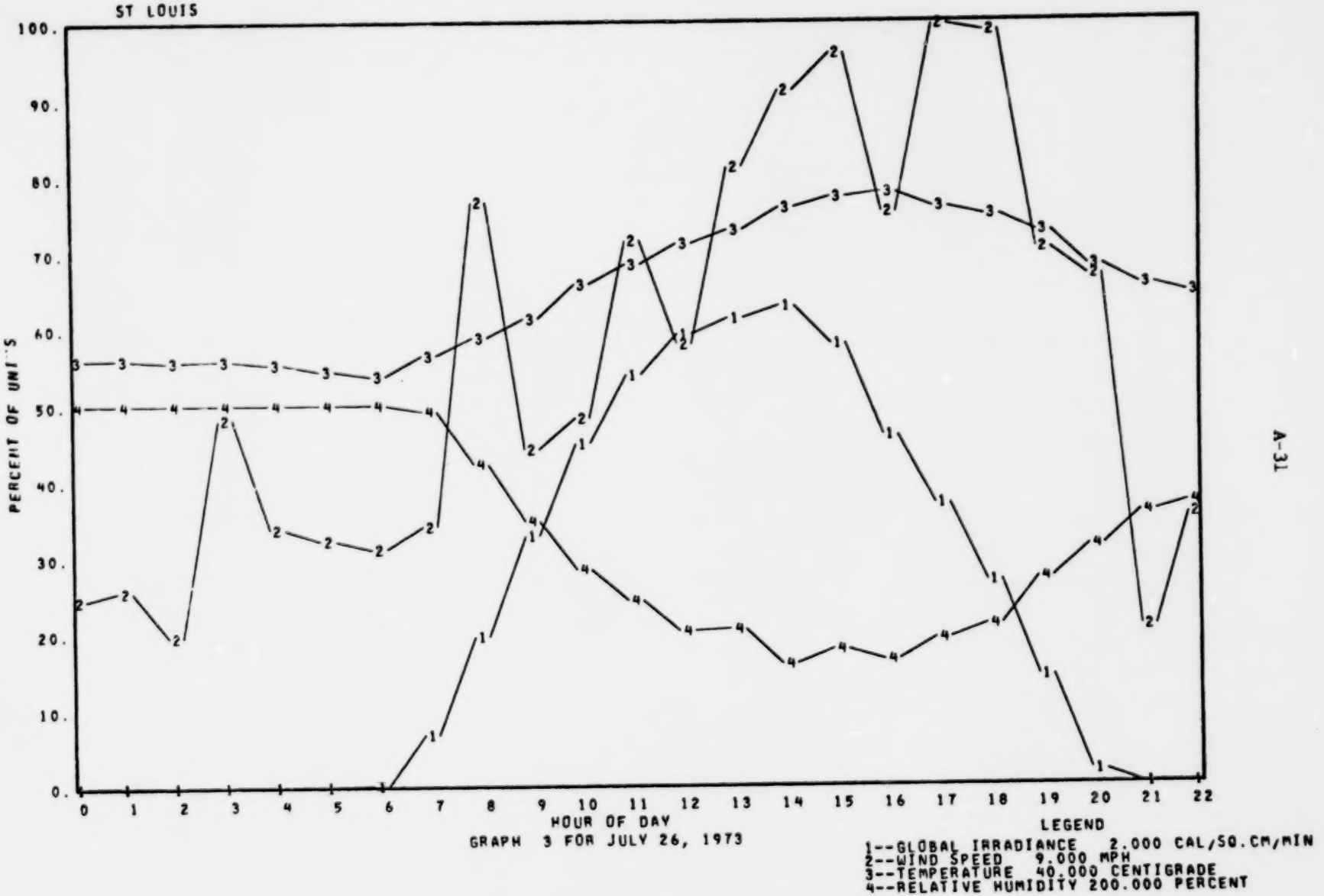
GRAPH 3 FOR JULY 25, 1973

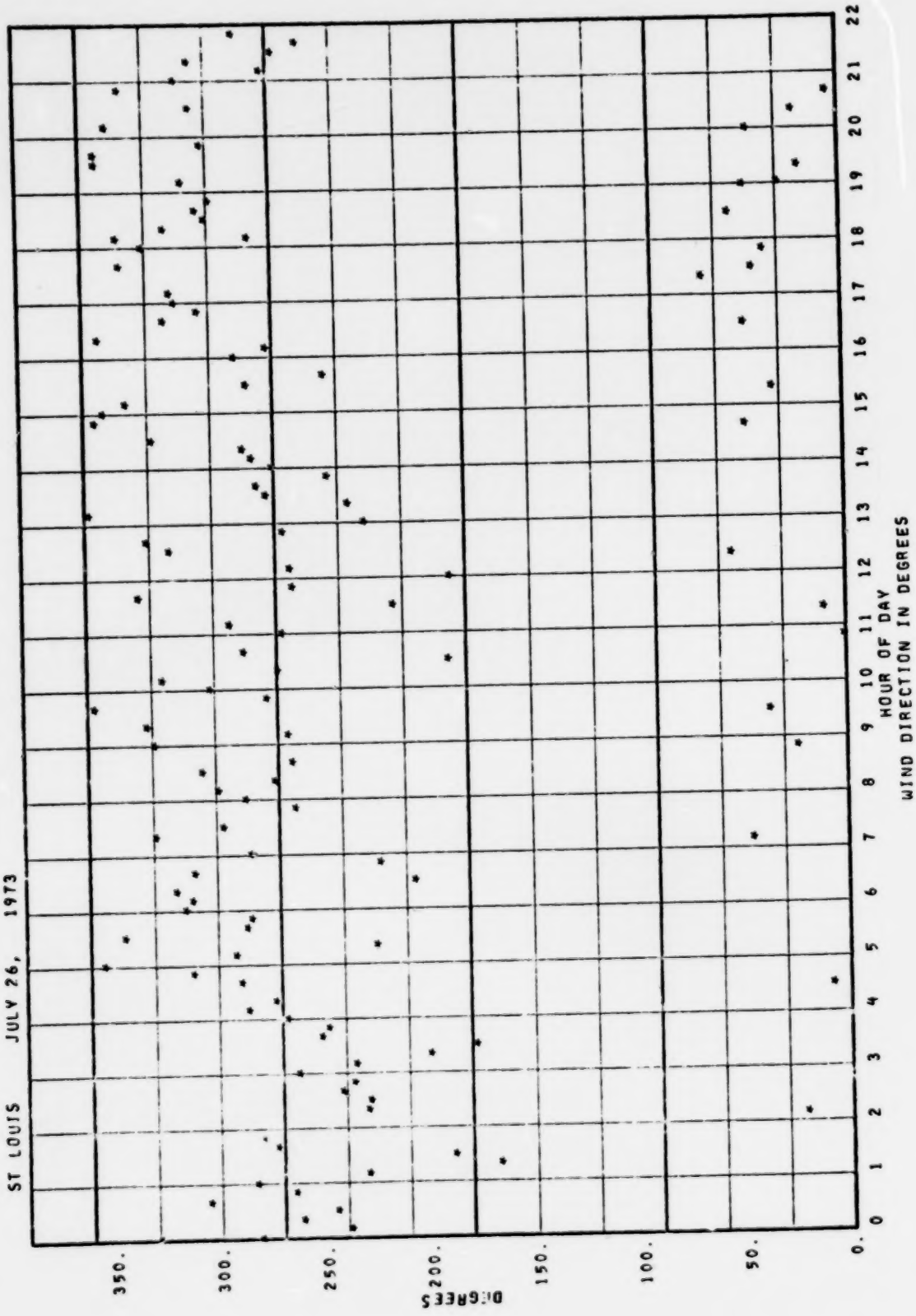

ST LOUIS JULY 25, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
0.
50.
100.
150.
200.
250.
300.
350.

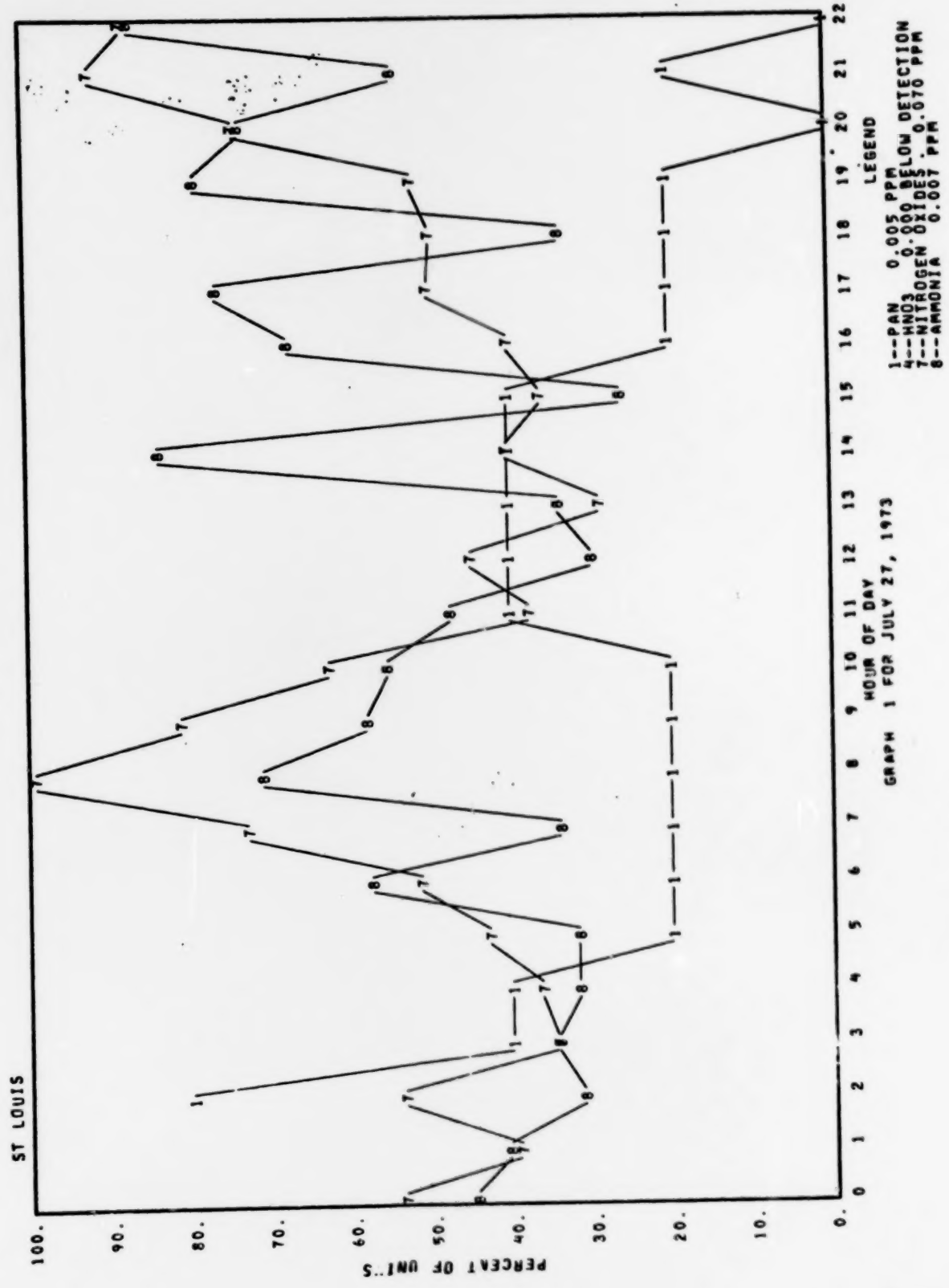

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR JULY 26, 1973
LEGEND
1--PAN 0.002 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.070 PPM
8--AMMONIA 0.006 PPM

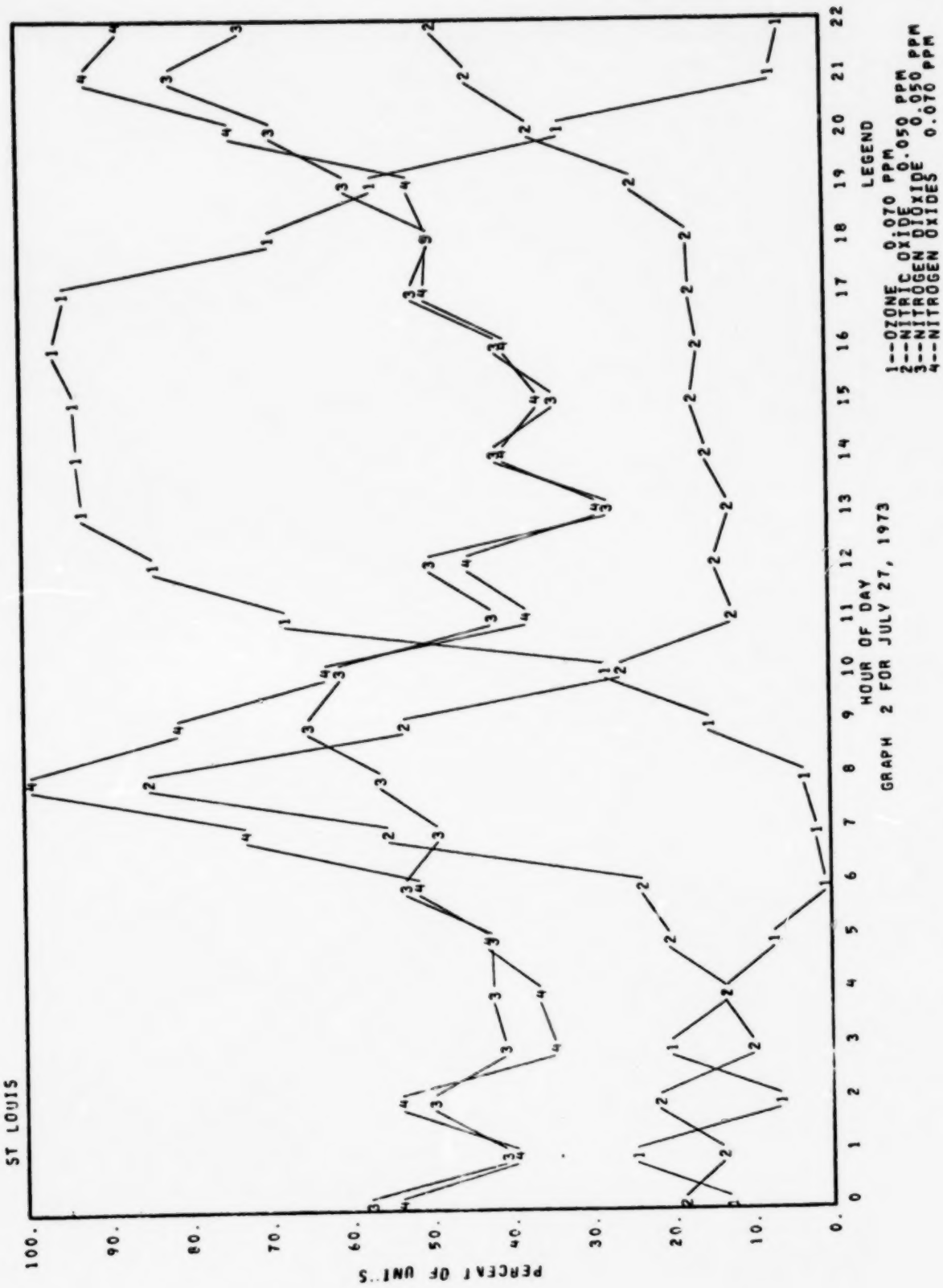


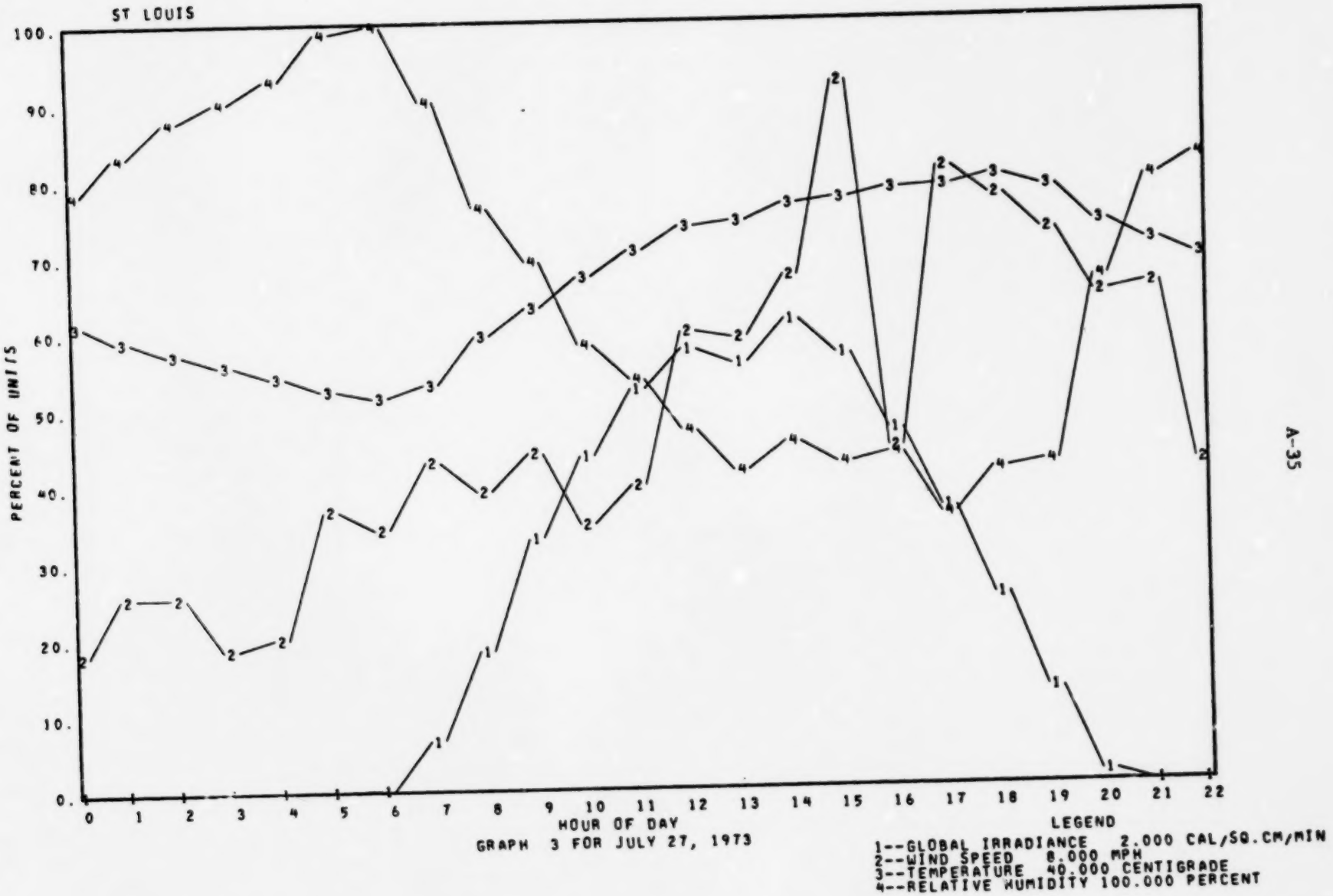
GRAPH 2 FOR JULY 26, 1973


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR JULY 26, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 9.000 MPH
3--TEMPERATURE 40.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

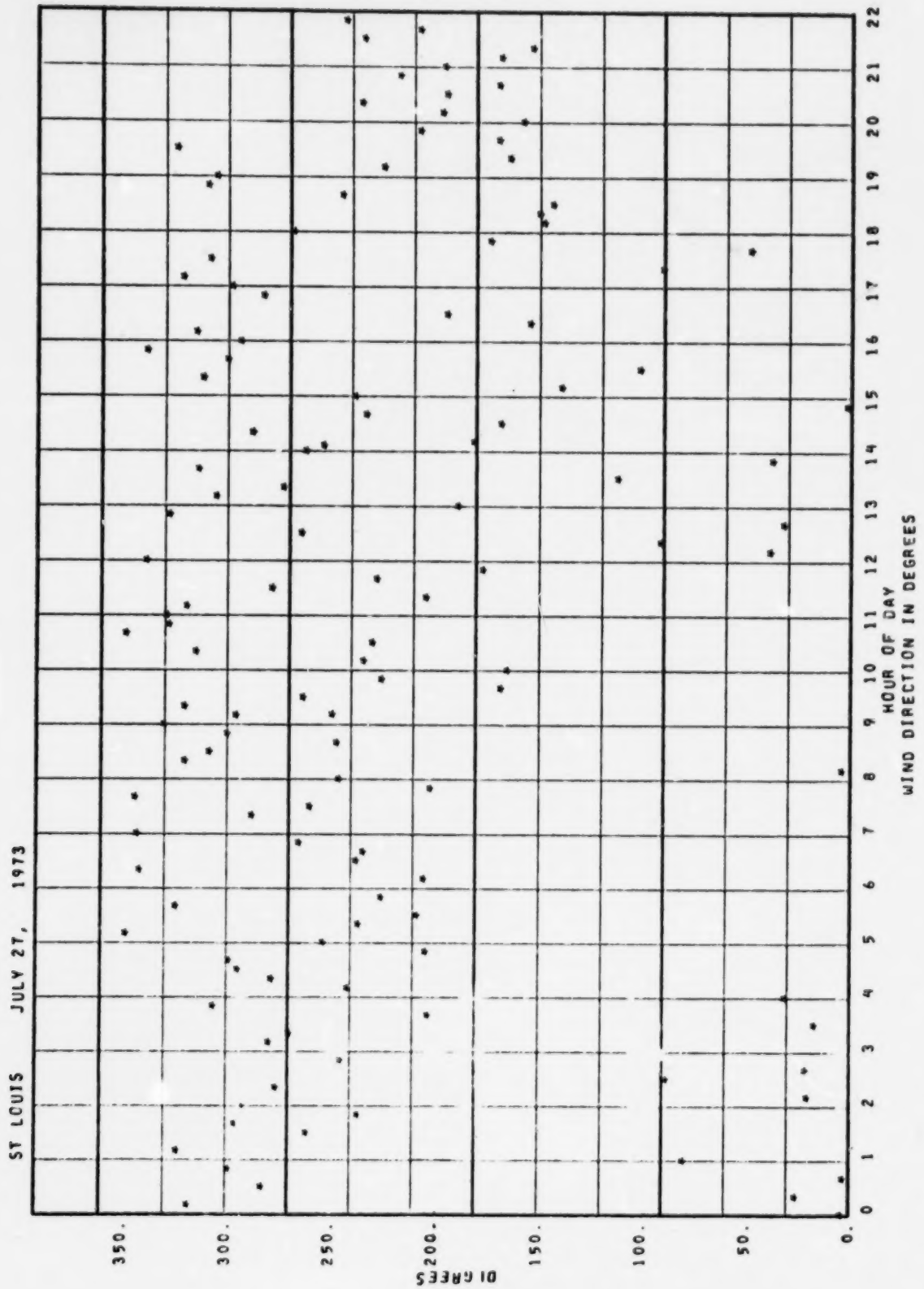

ST LOUIS JULY 26, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0. 50. 100. 150. 200. 250. 300. 350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

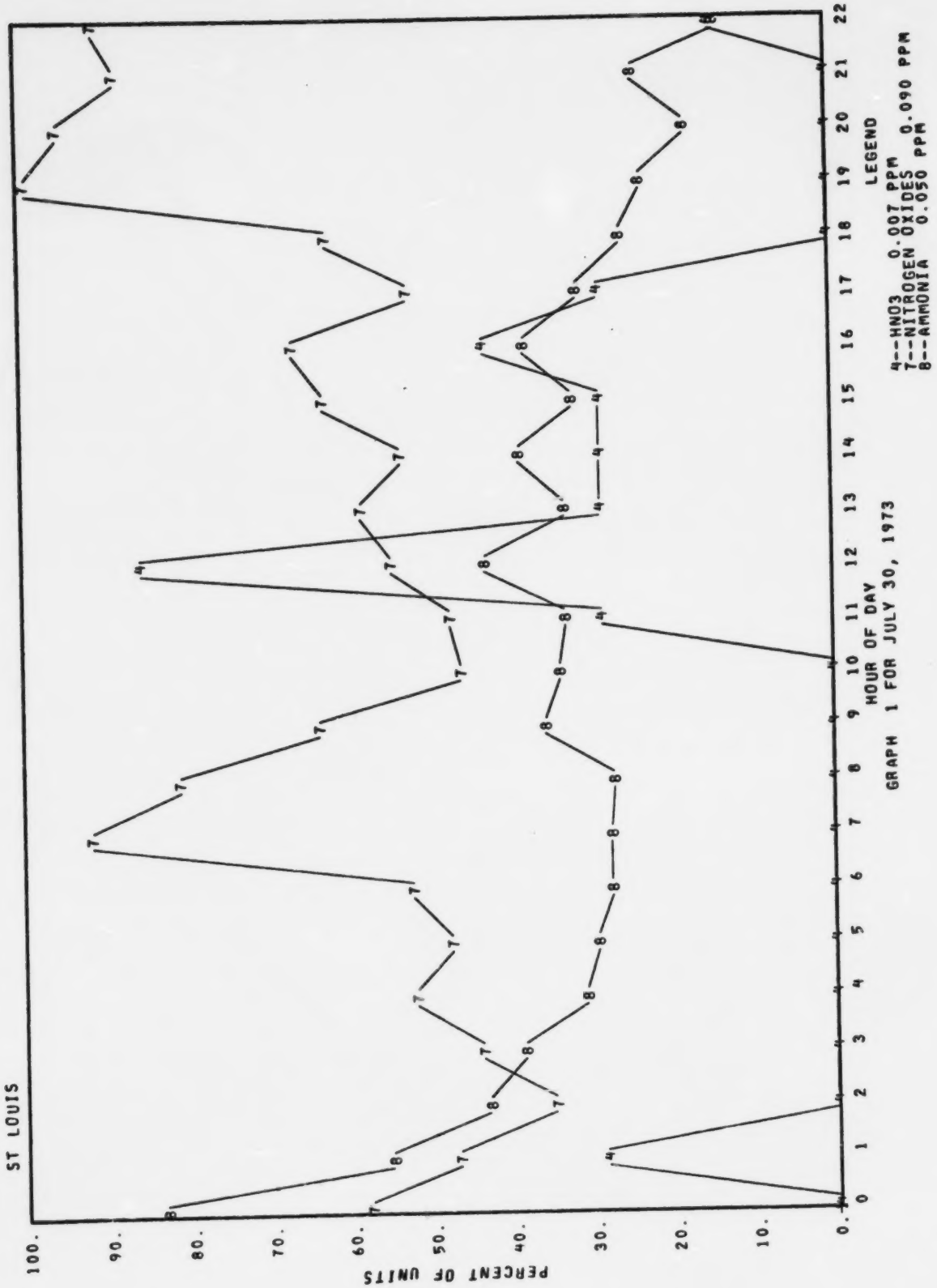

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR JULY 27, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.070 PPM
8--AMMONIA 0.007 PPM

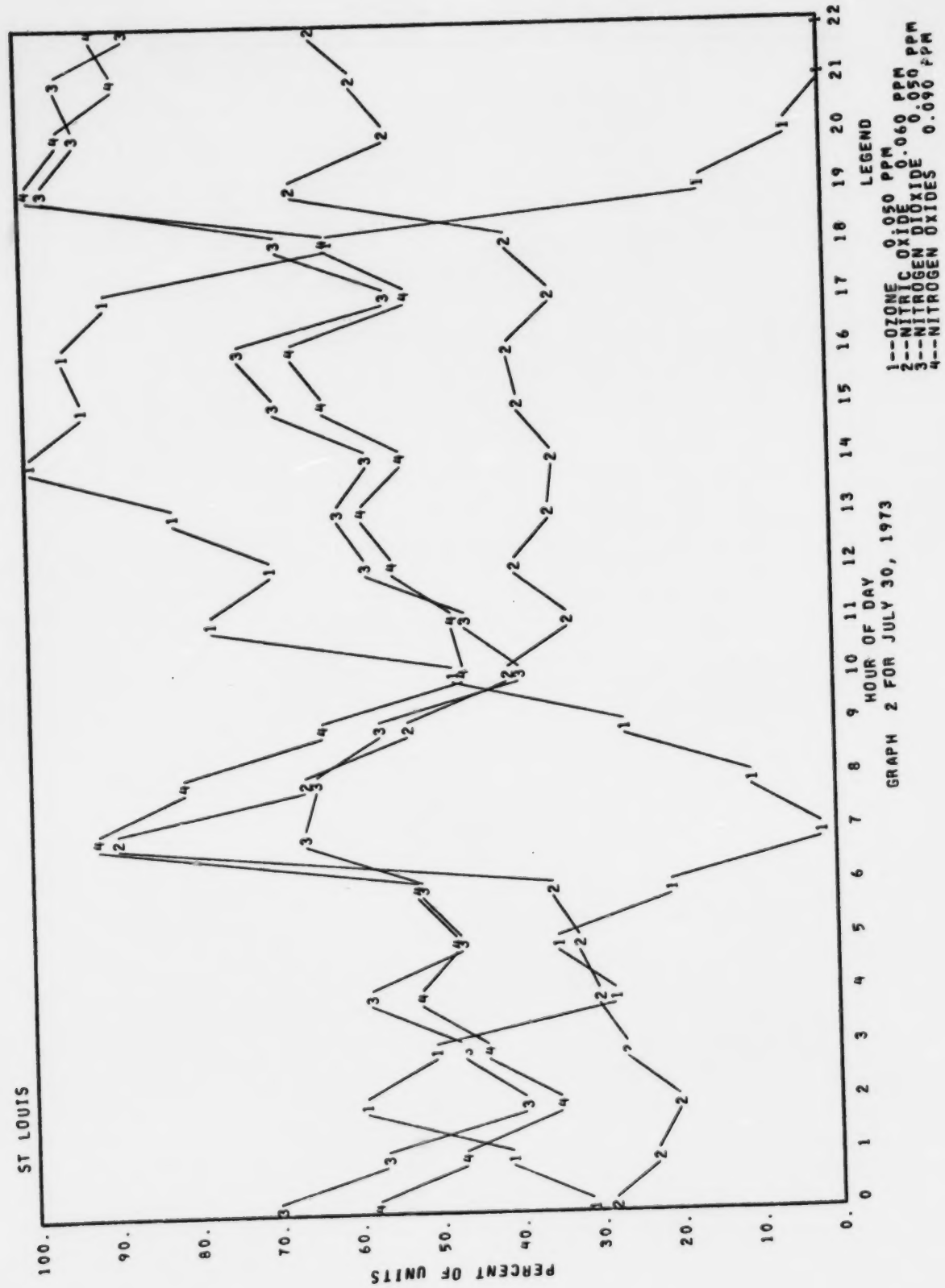

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR JULY 27, 1973
LEGEND
1--OZONE 0.070 PPM
2--NITRIC OXIDE 0.050 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.070 PPM



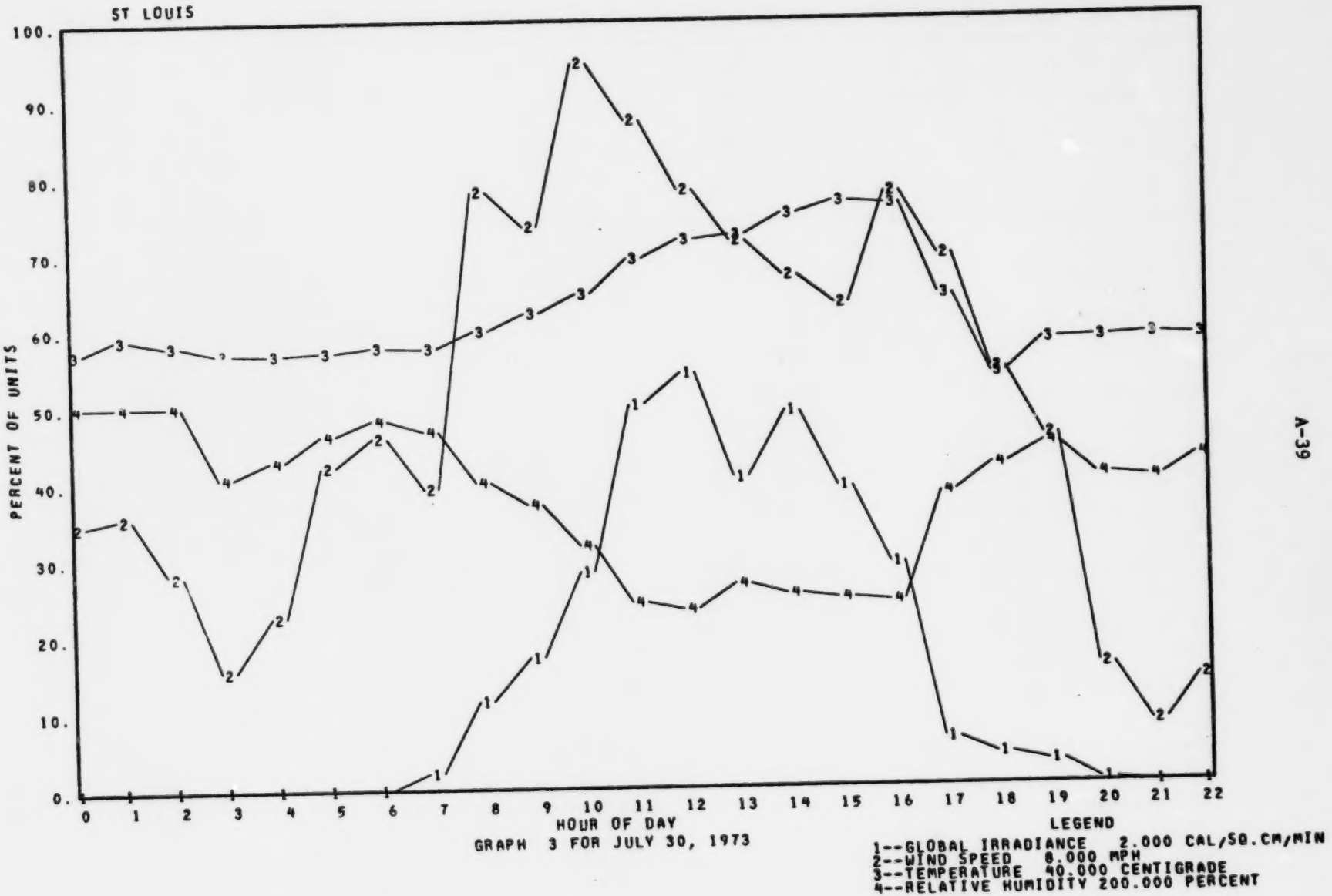
GRAPH 3 FOR JULY 27, 1973


ST LOUIS JULY 27, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
0. 50. 100. 150. 200. 250. 300. 350.

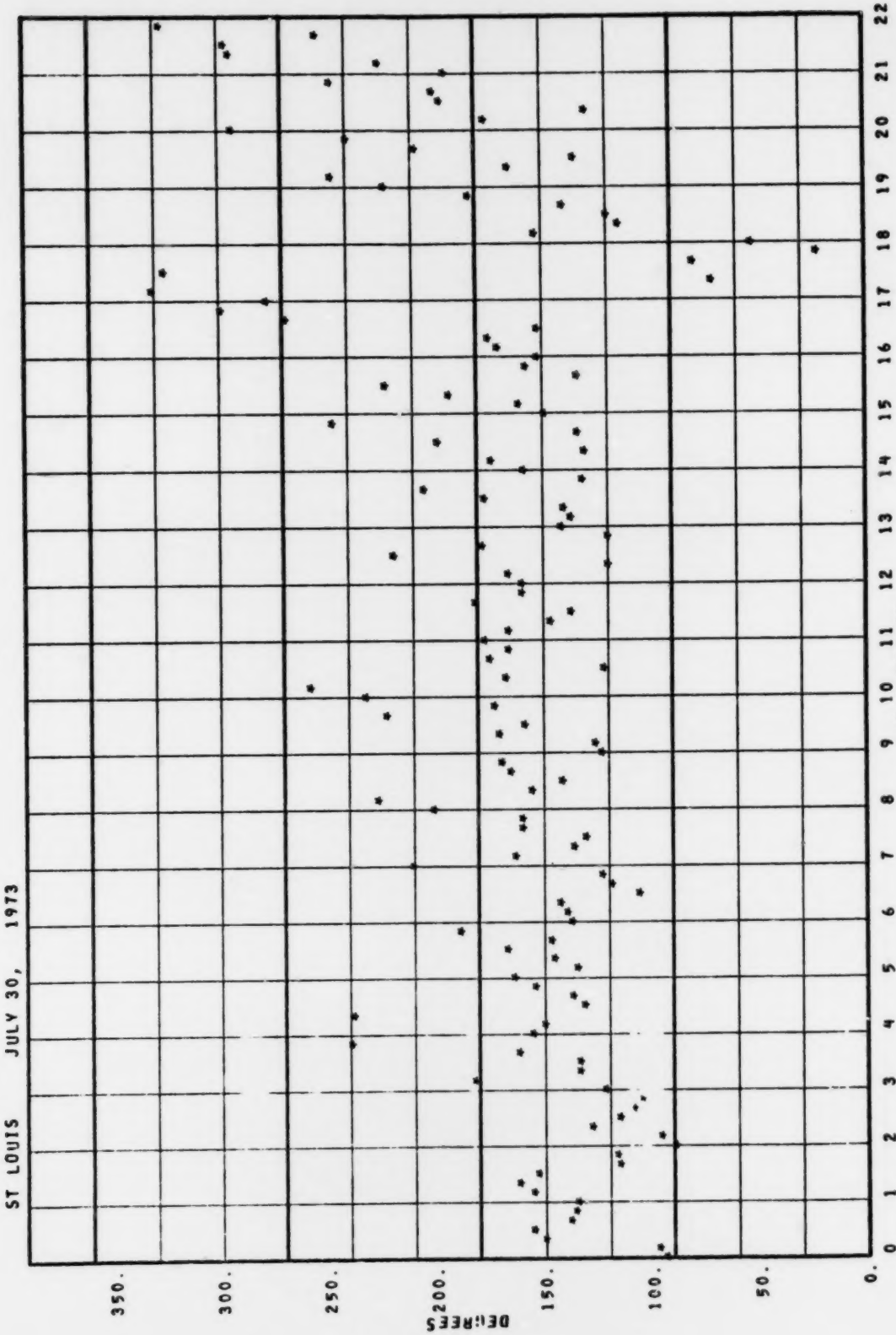

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR JULY 30, 1973
LEGEND
4--HNO3 0.007 PPM
7--NITROGEN OXIDES 0.090 PPM
8--AMMONIA 0.050 PPM

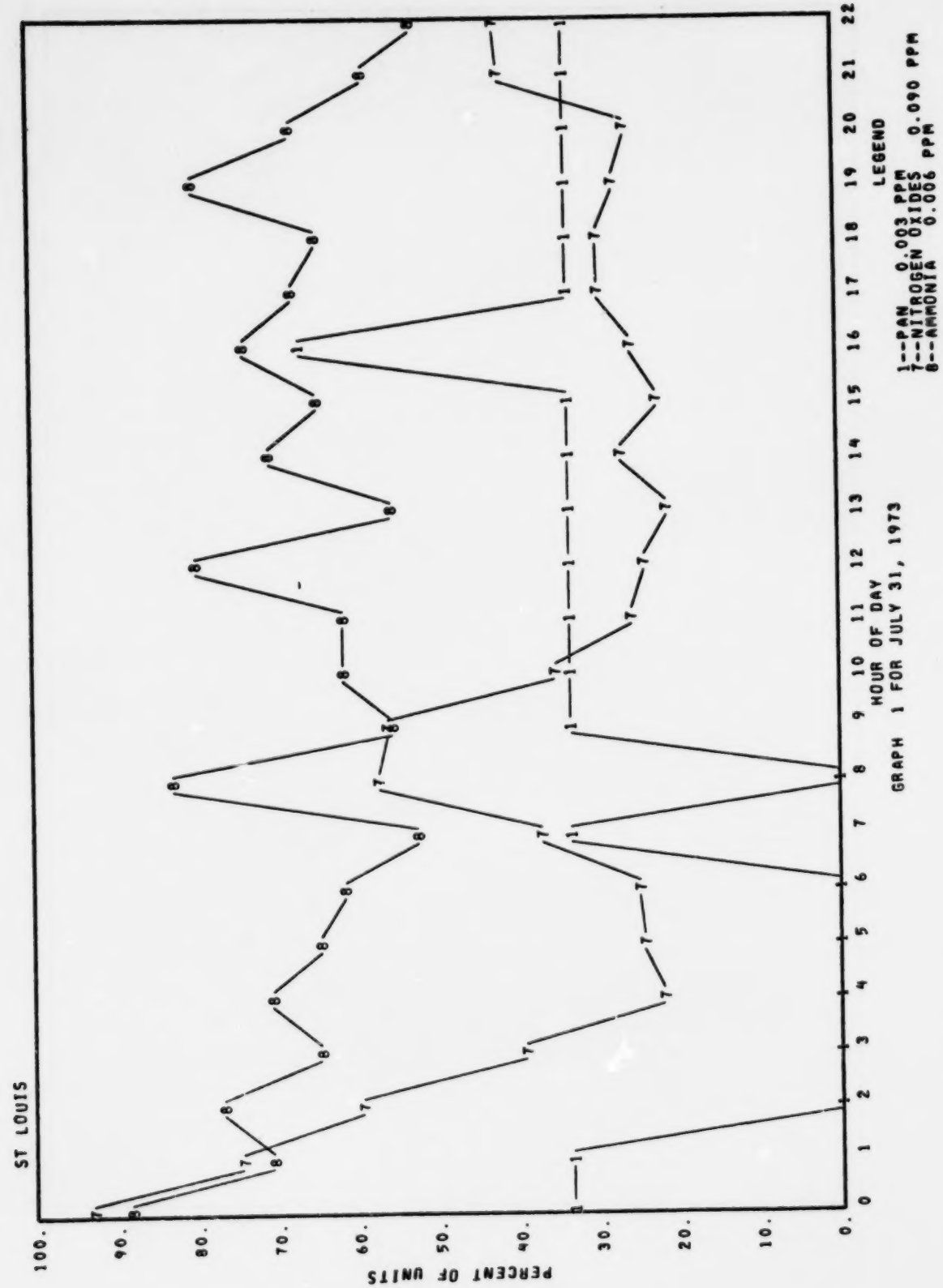


GRAPH 2 FOR JULY 30, 1973

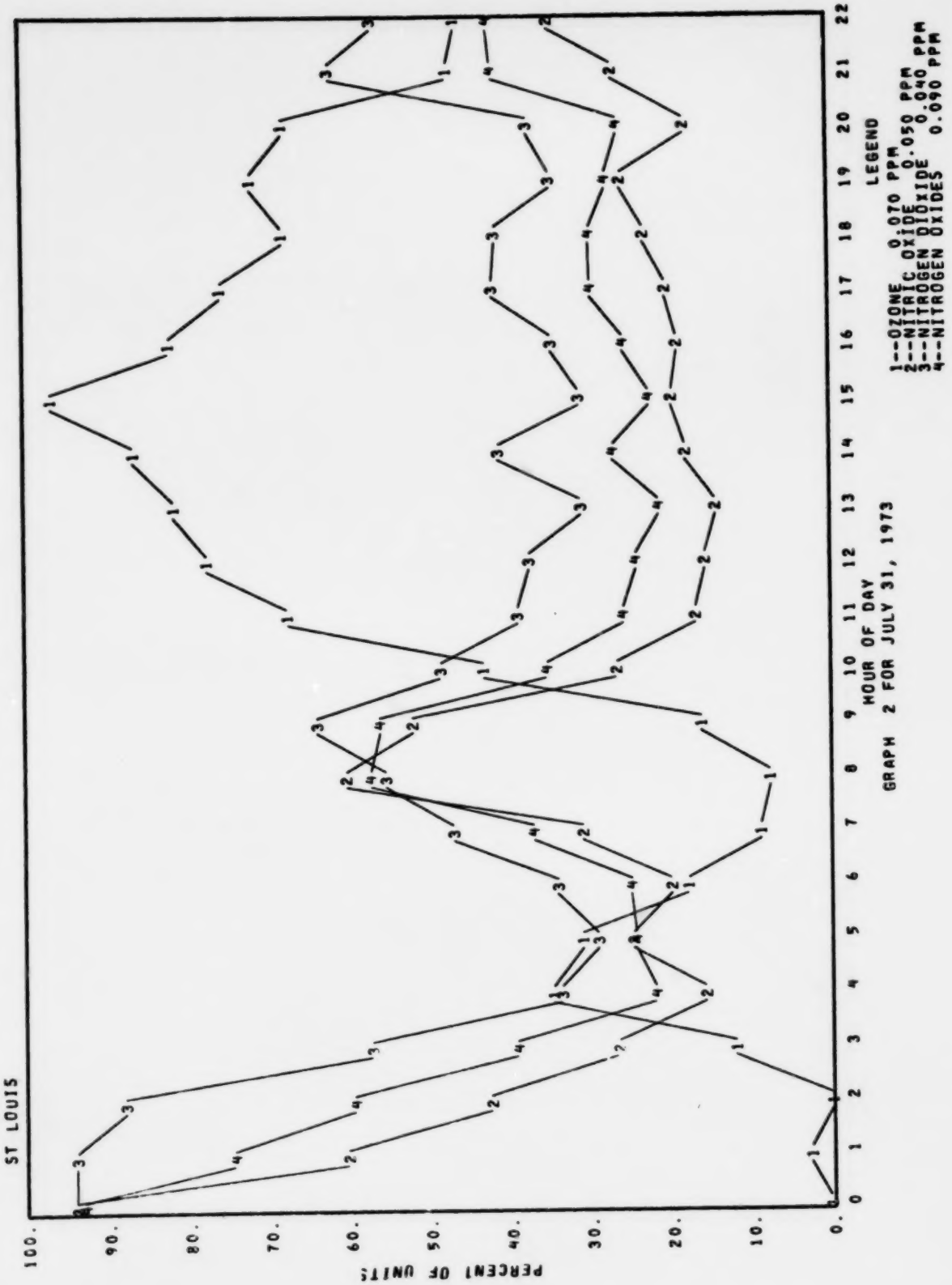


GRAPH 3 FOR JULY 30, 1973

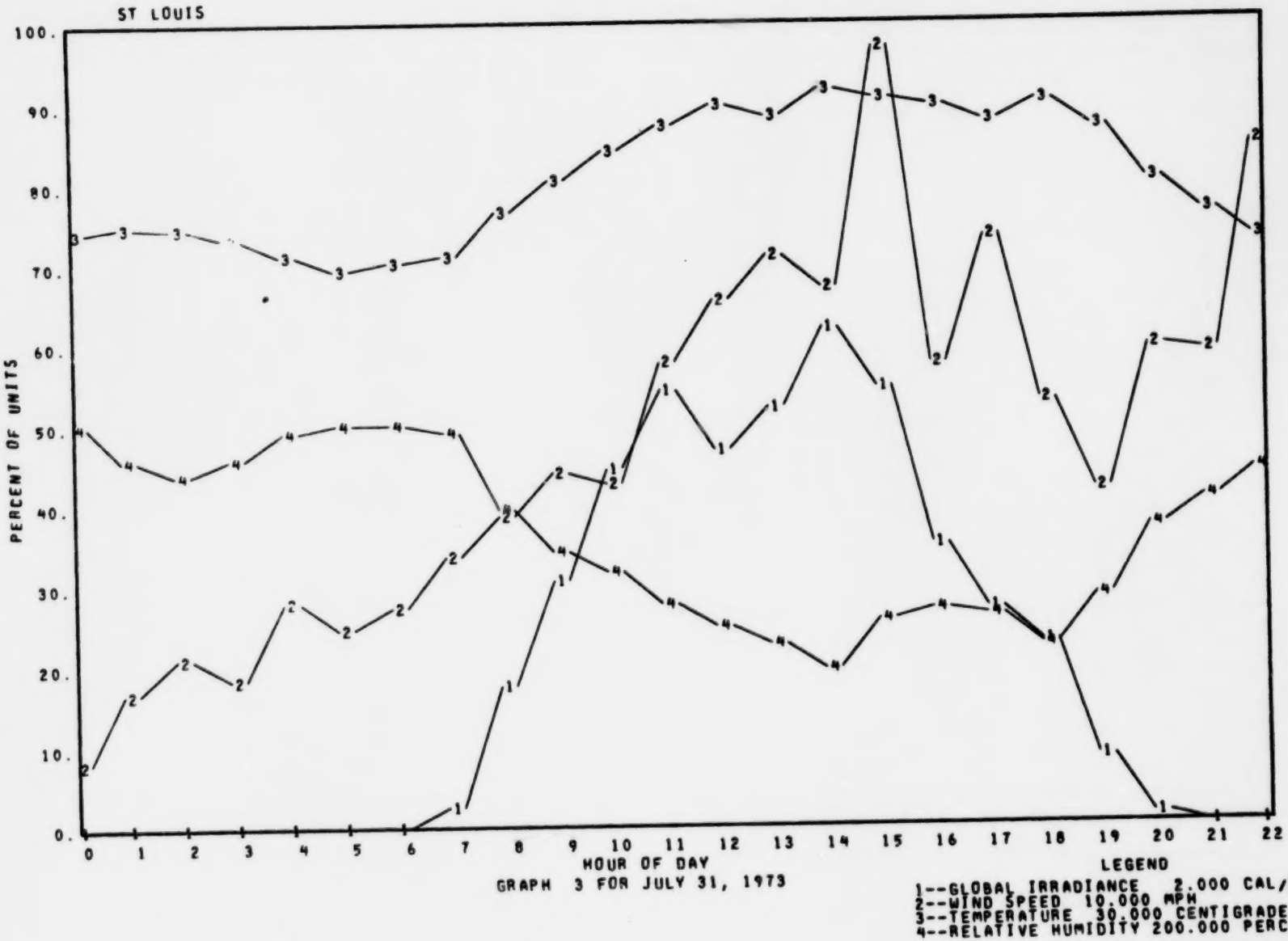

ST LOUIS JULY 30, 1973
WIND DIRECTION IN DEGREES
DEGREES
HOUR OF DAY
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



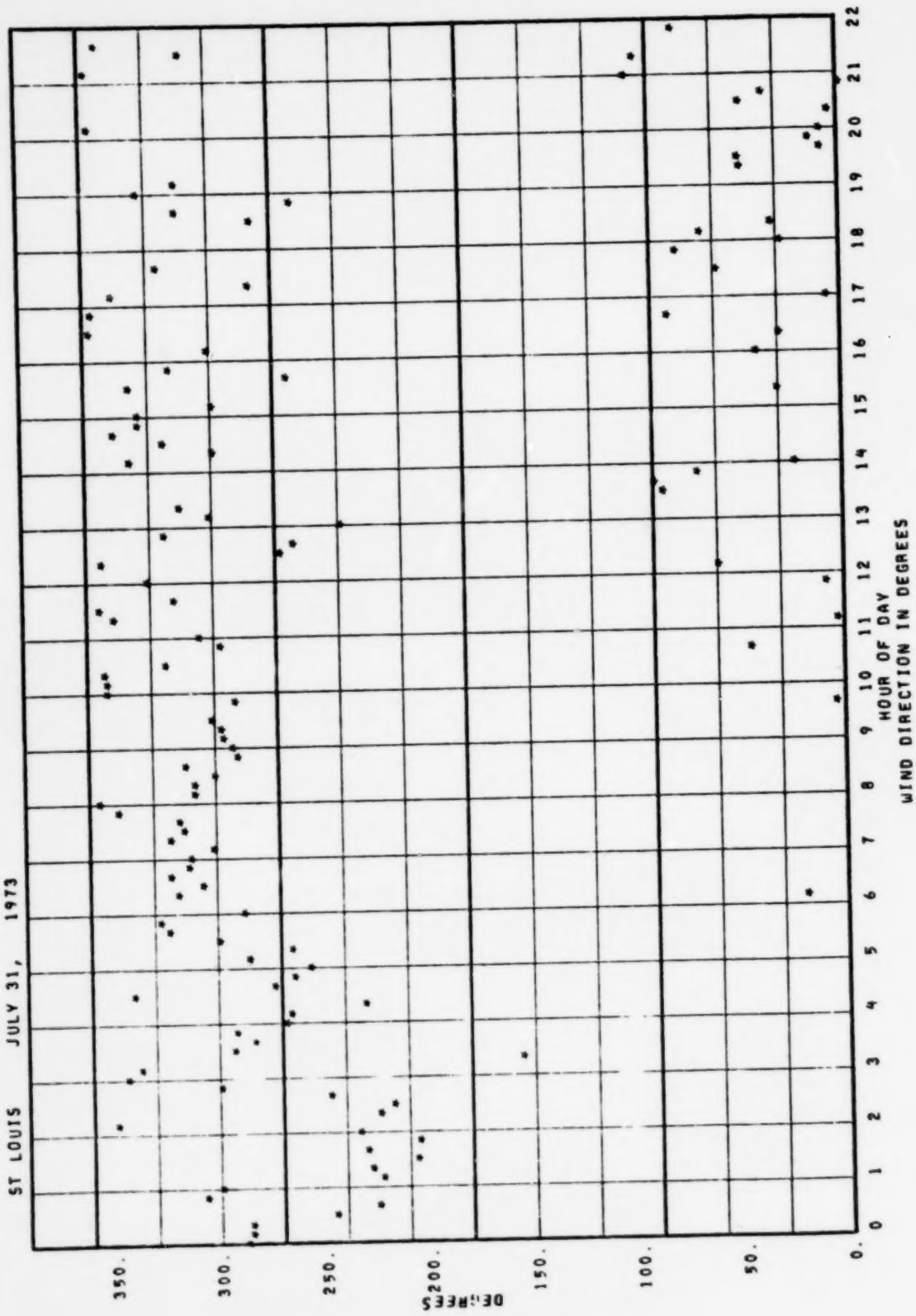
GRAPH 1 FOR JULY 31, 1973

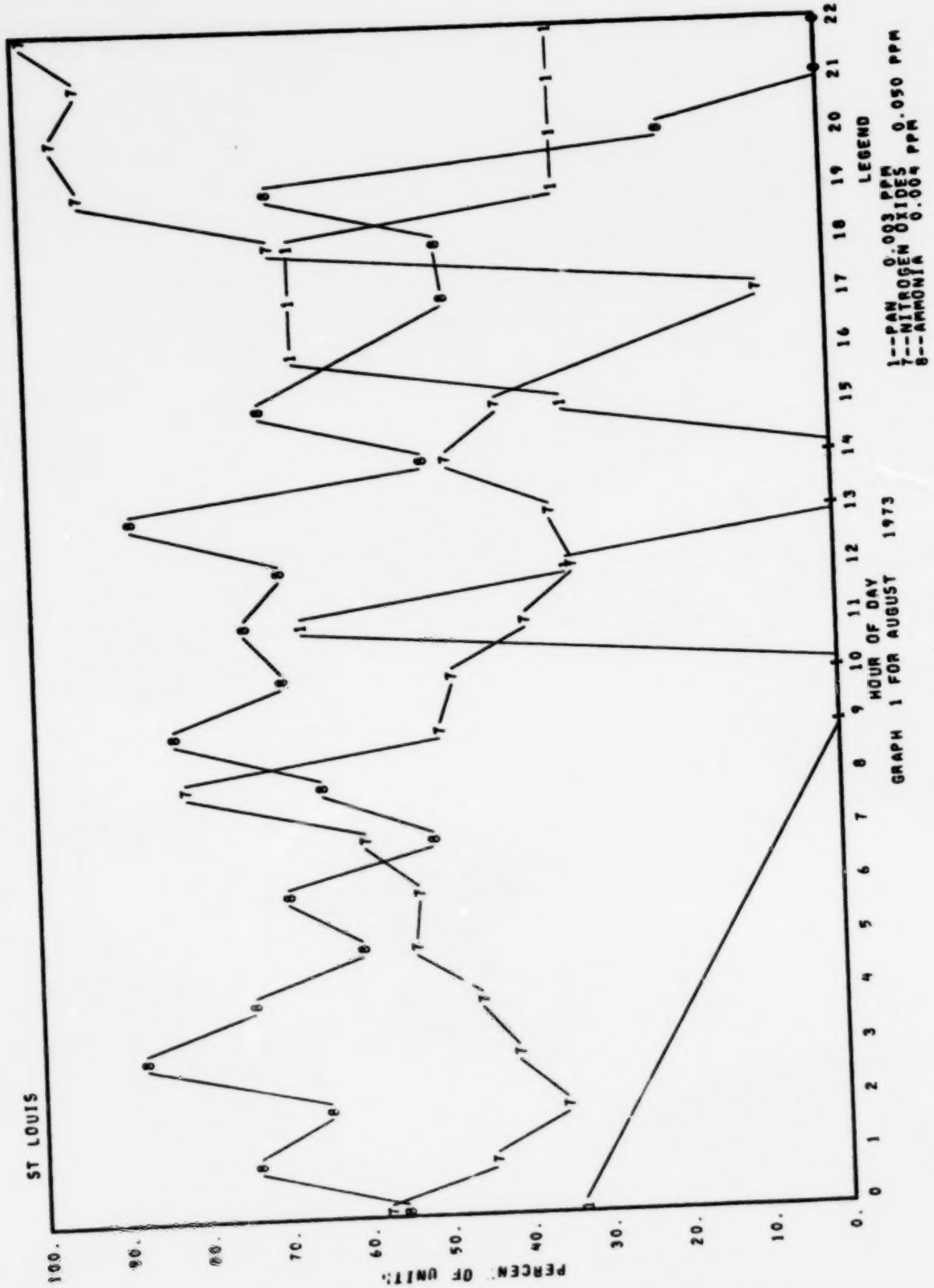


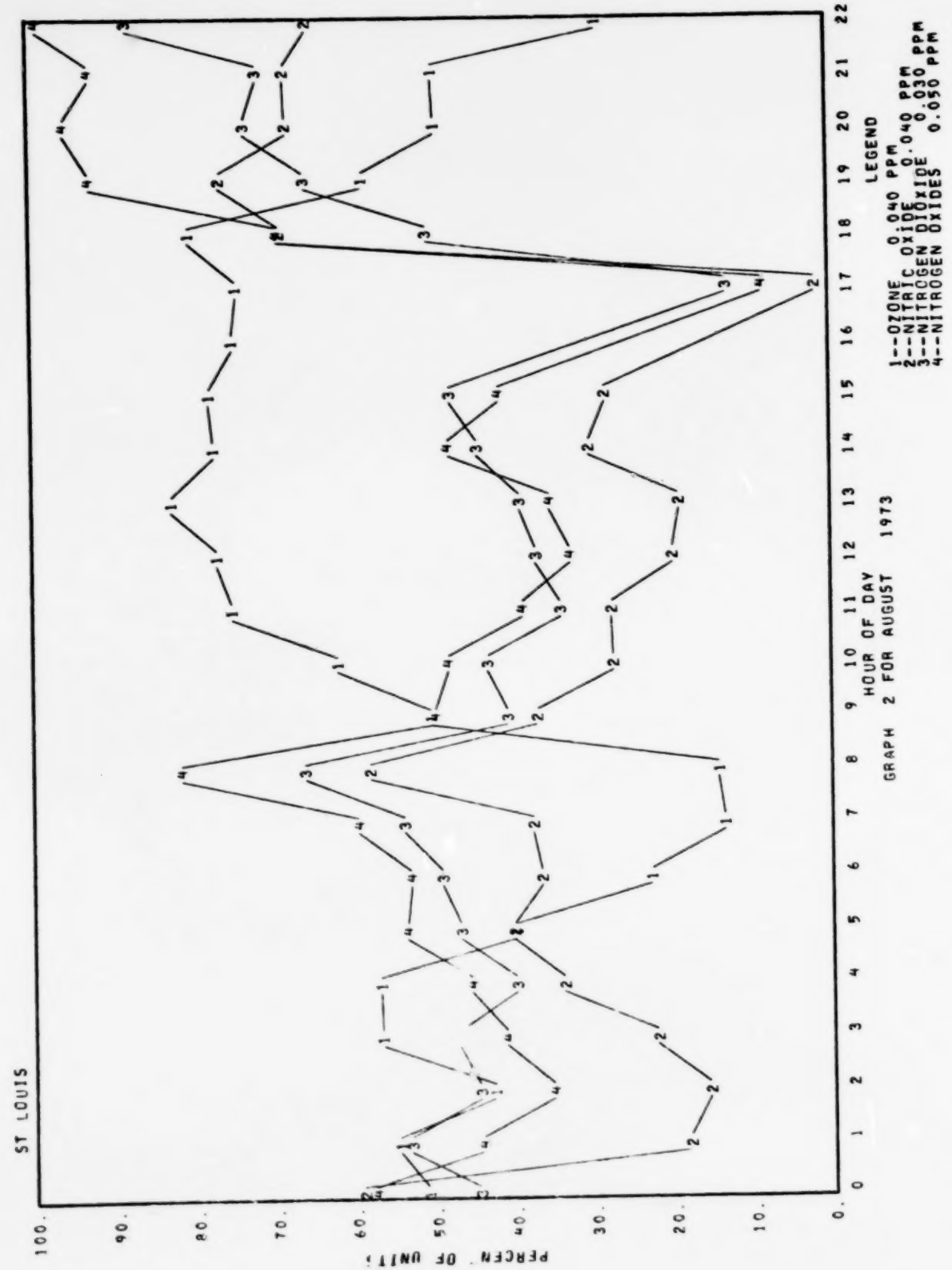
GRAPH 2 FOR JULY 31, 1973

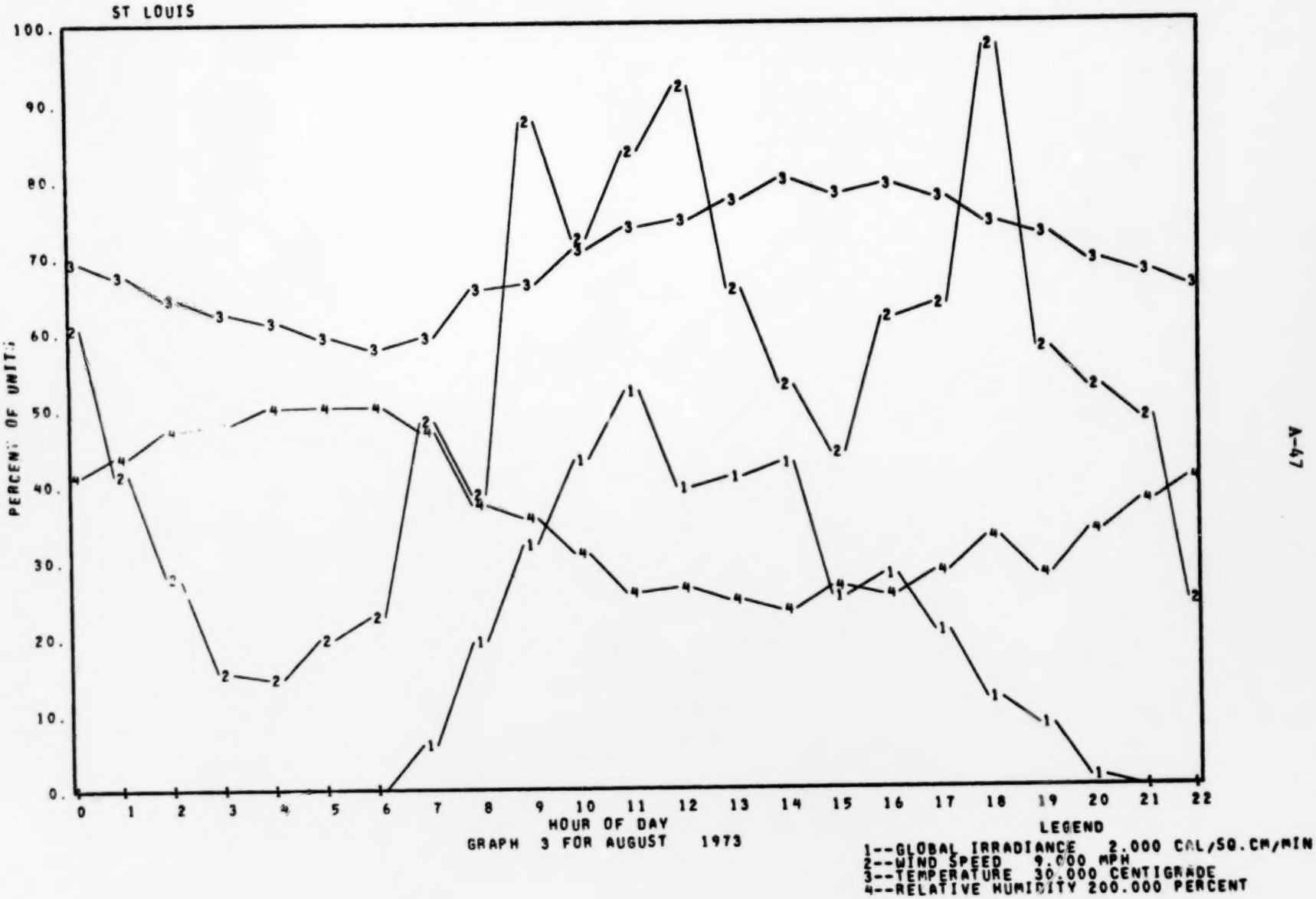


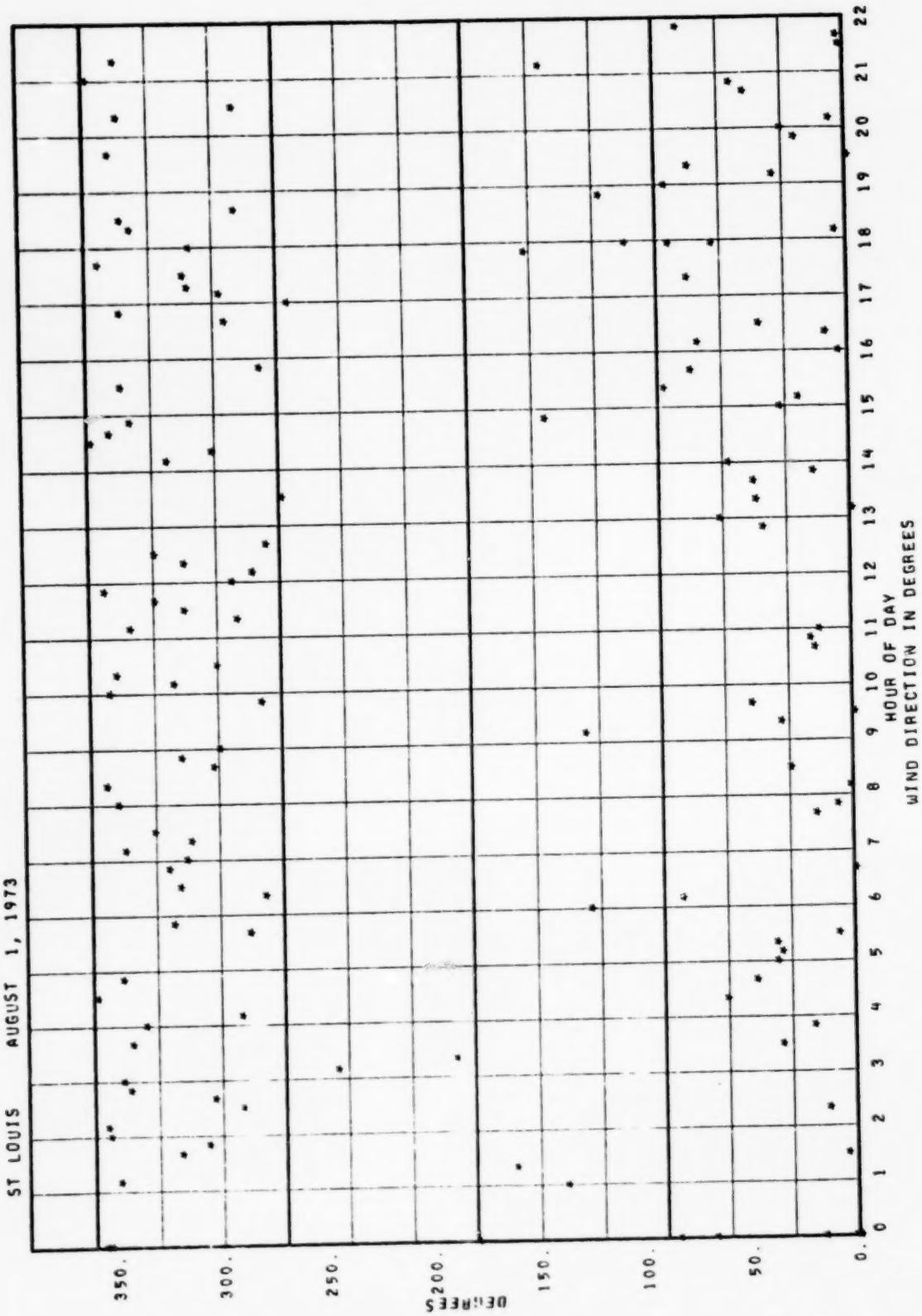
GRAPH 3 FOR JULY 31, 1973

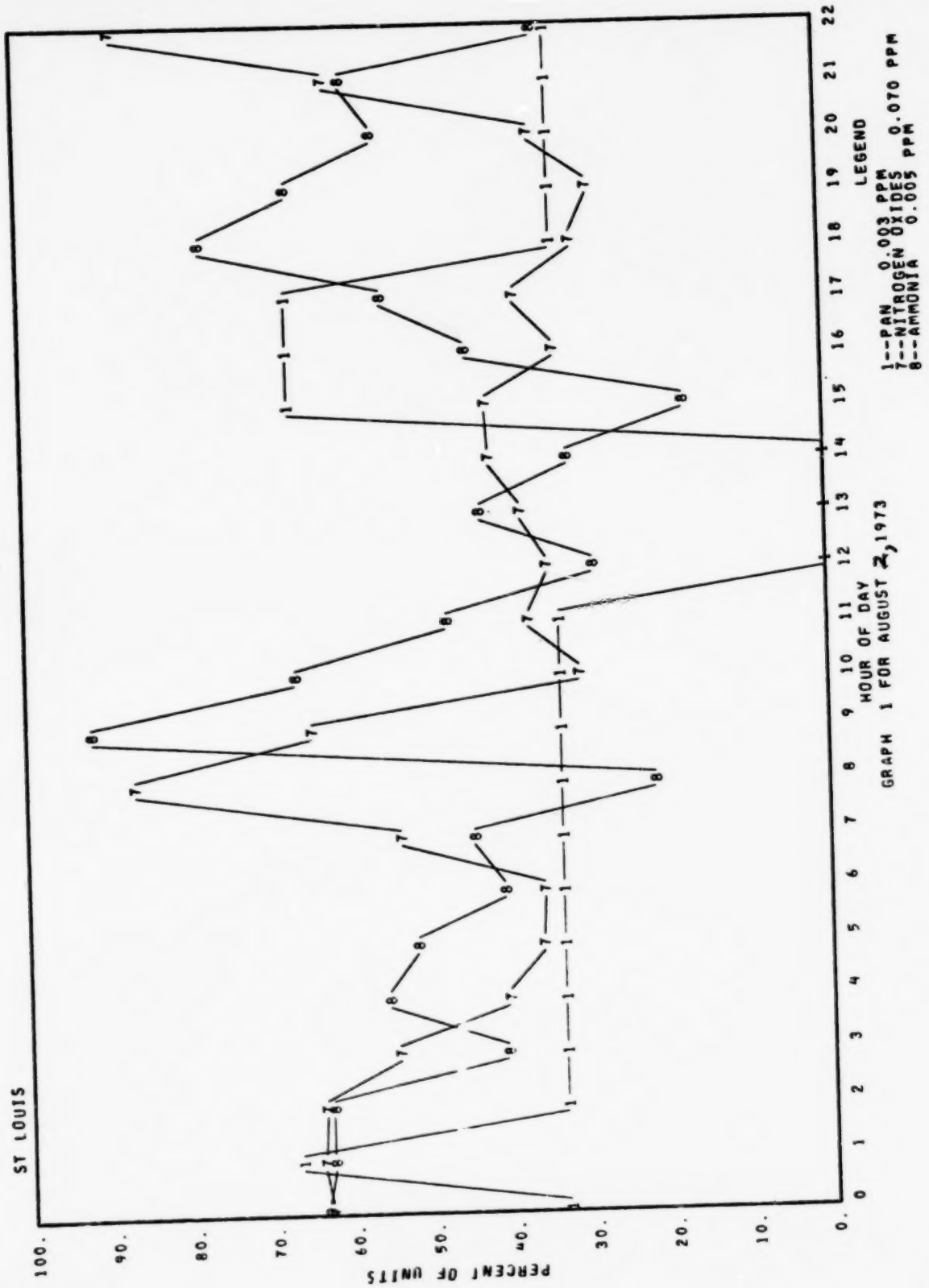

ST LOUIS JULY 31, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 1973
LEGEND
1--PAN 0.003 PPM
7--NITROGEN OXIDES 0.050 PPM
8--AMMONIA 0.004 PPM

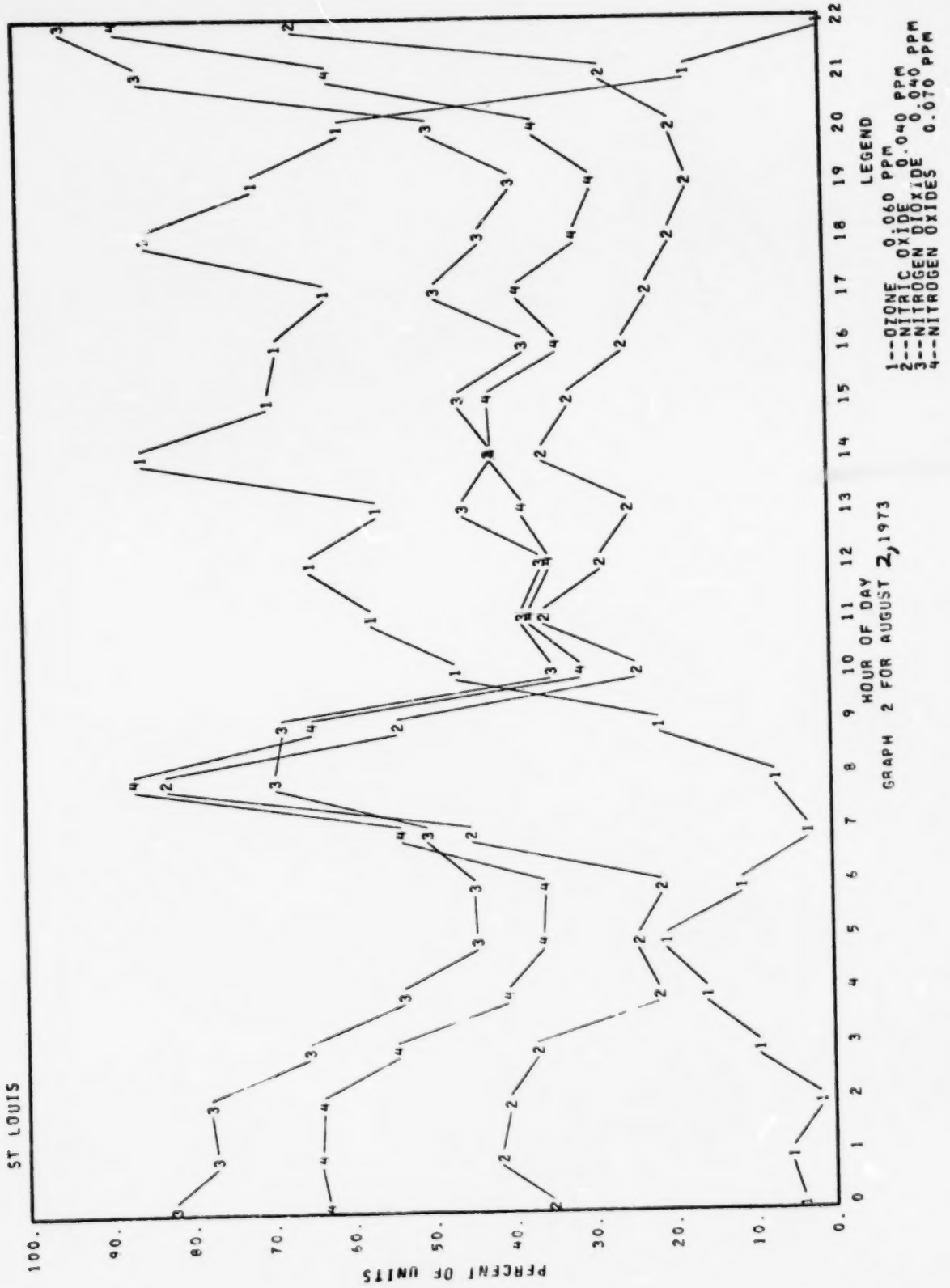

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 1973
LEGEND
1--OZONE 0.040 PPM
2--NITRIC OXIDE 0.040 PPM
3--NITROGEN DIOXIDE 0.030 PPM
4--NITROGEN OXIDES 0.050 PPM


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 9.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

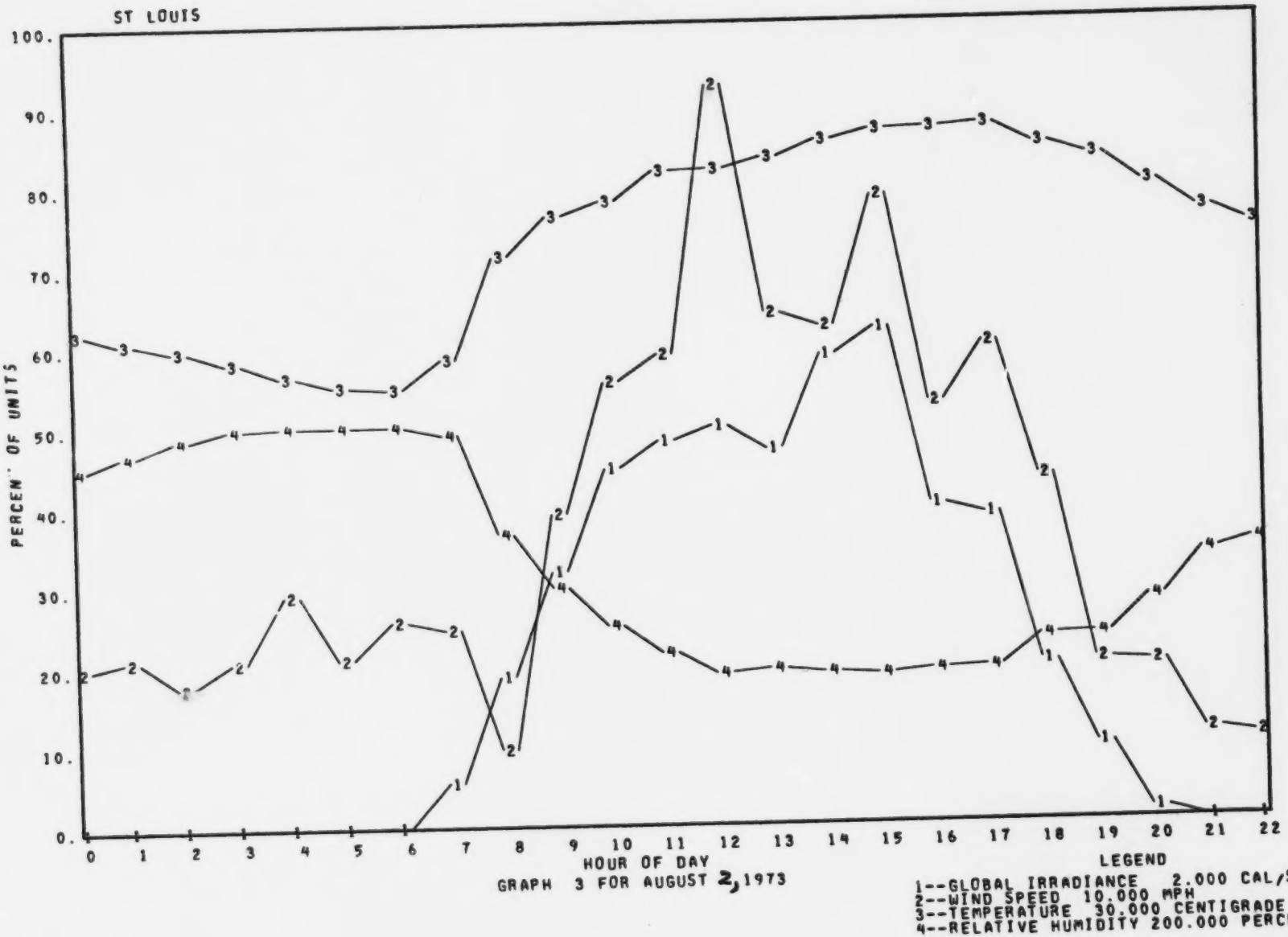

ST LOUIS AUGUST 1, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

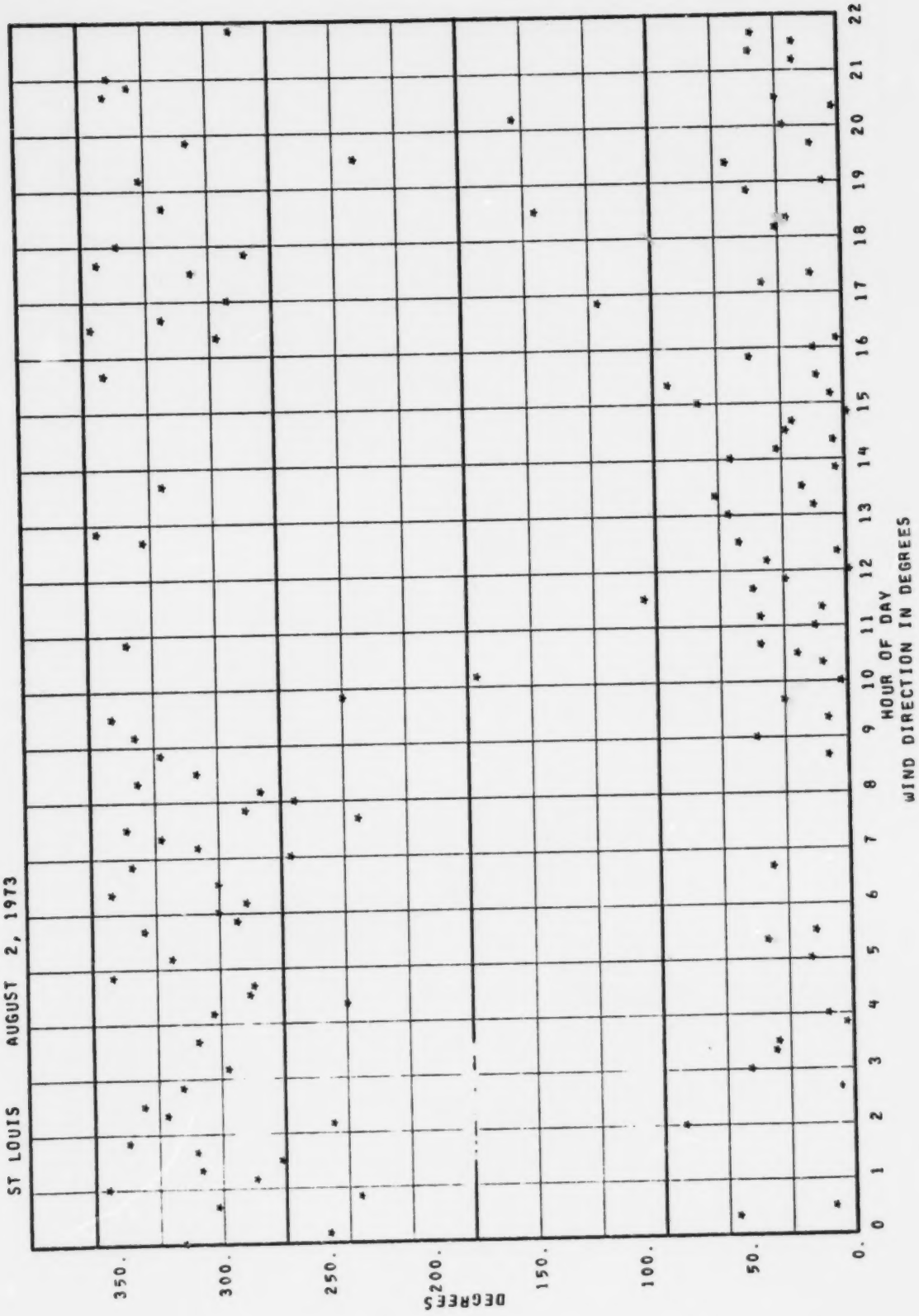


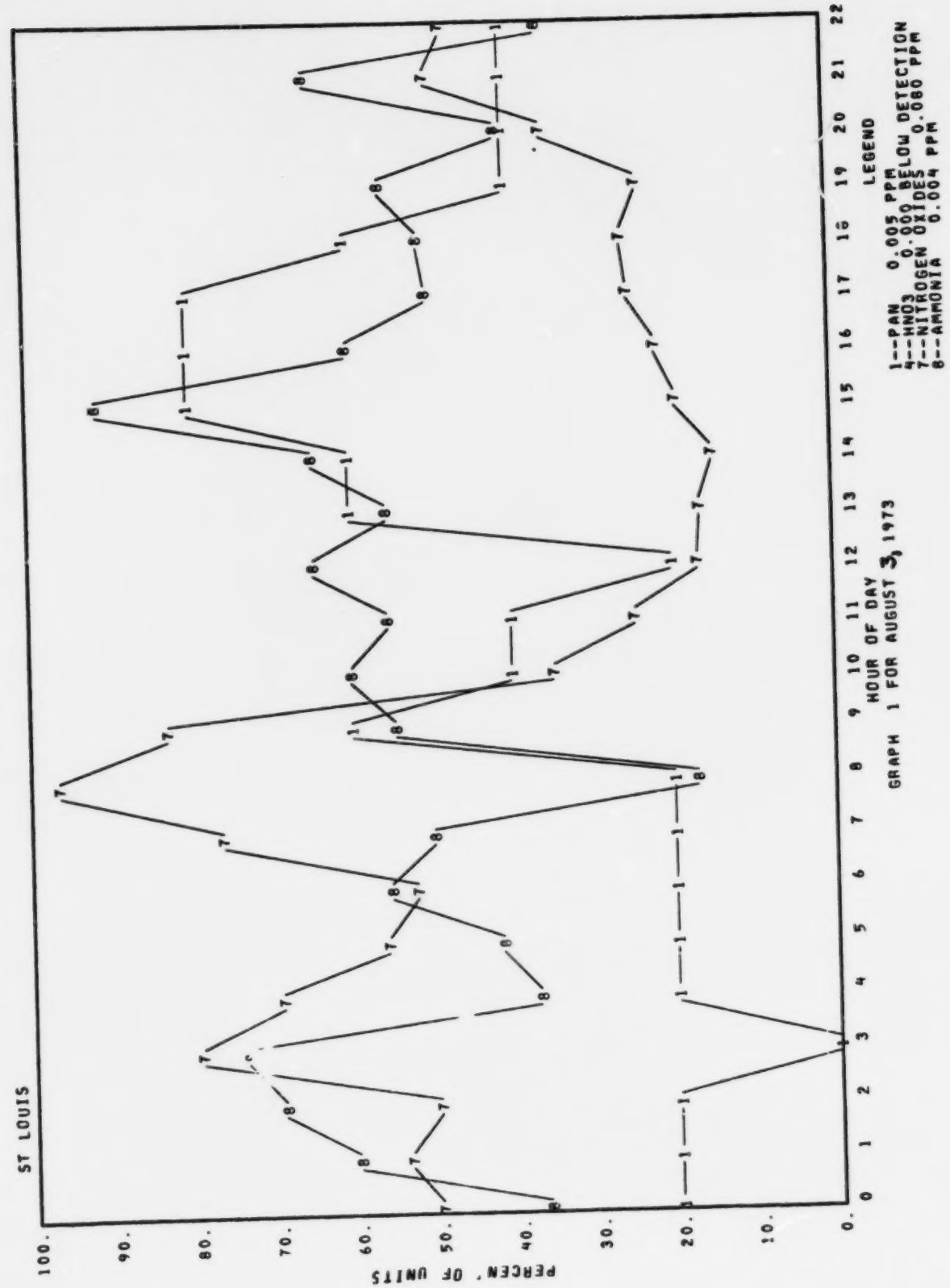
GRAPH 1 FOR AUGUST 2, 1973

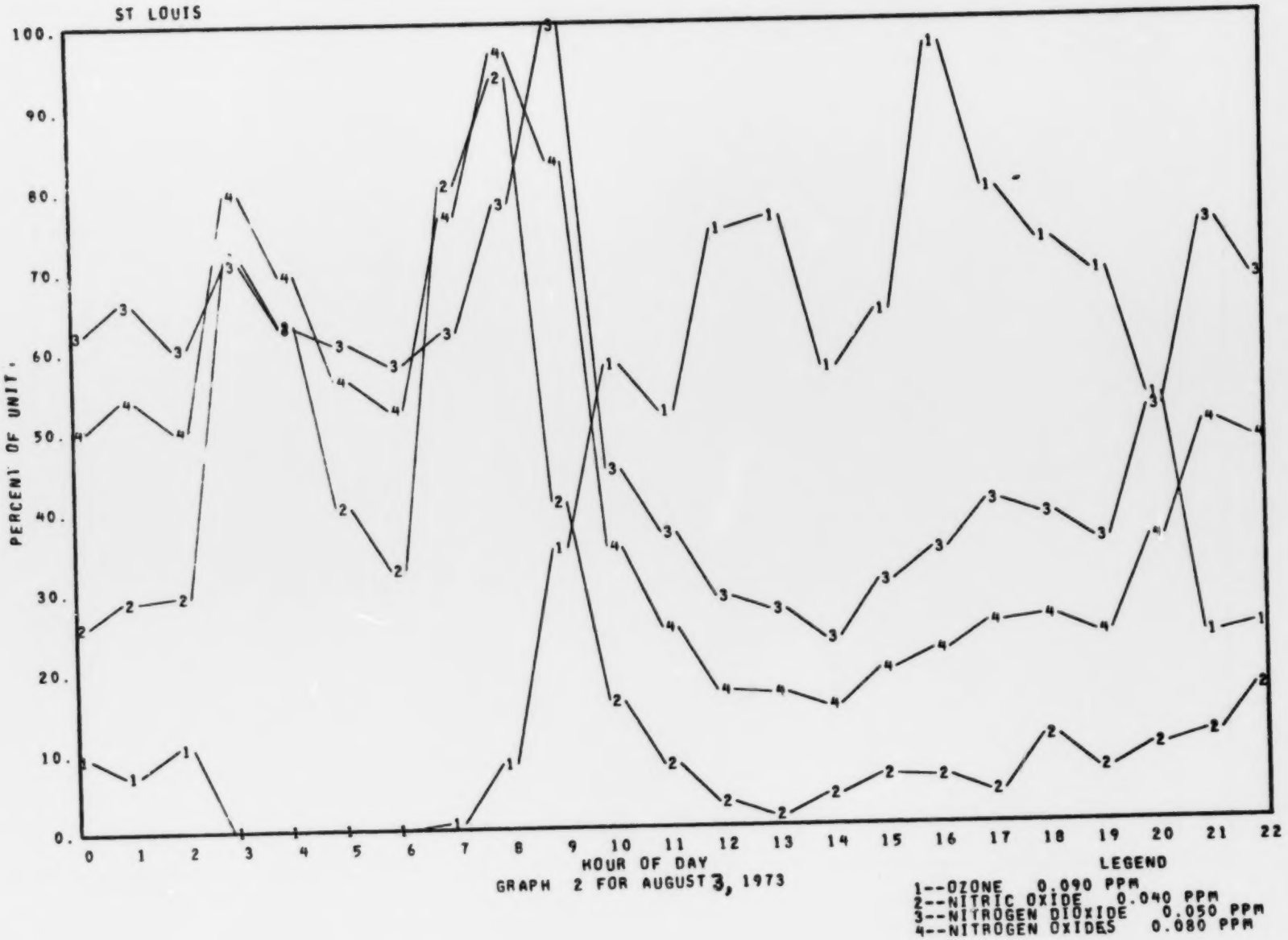


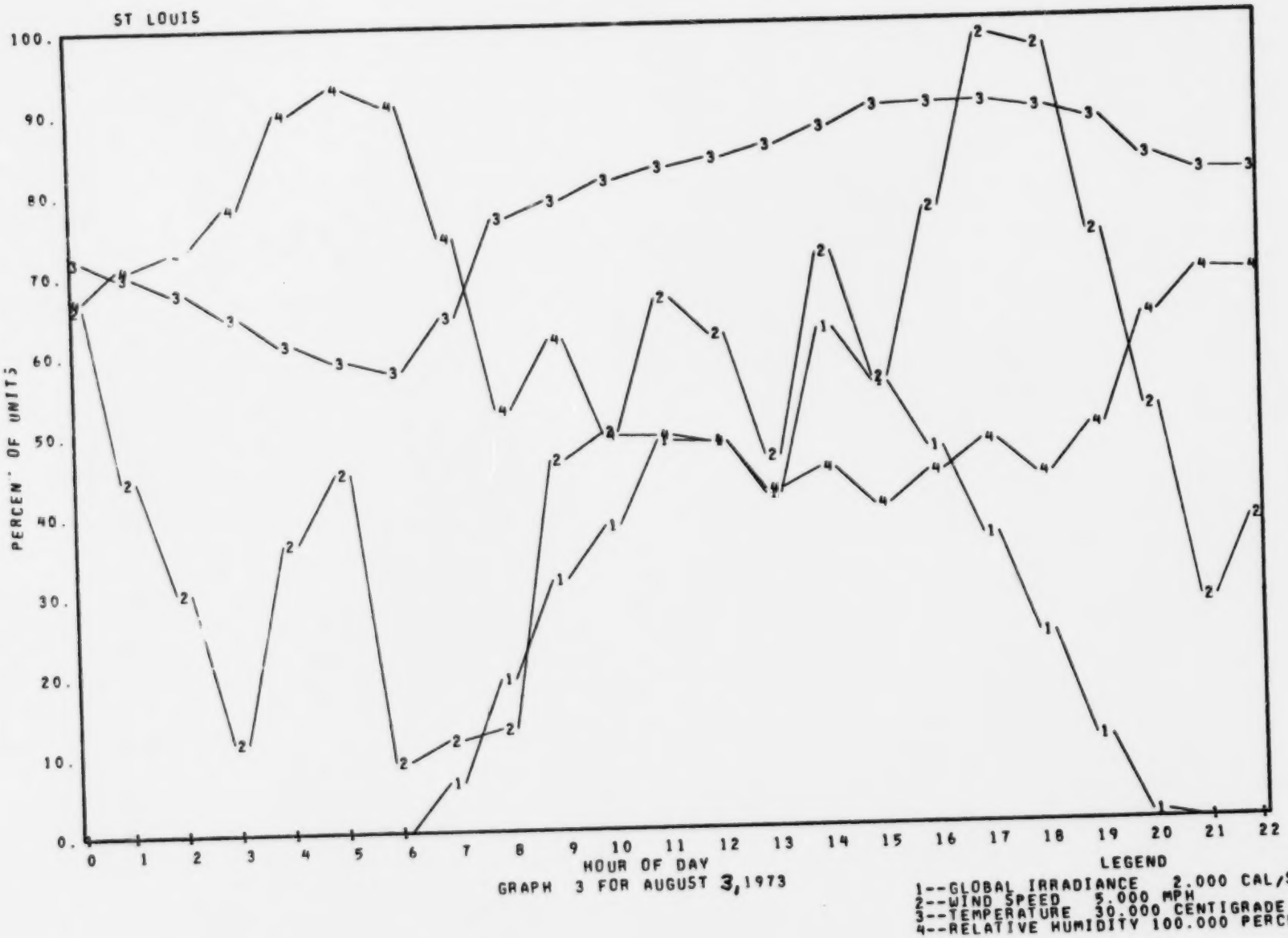
GRAPH 2 FOR AUGUST 2, 1973

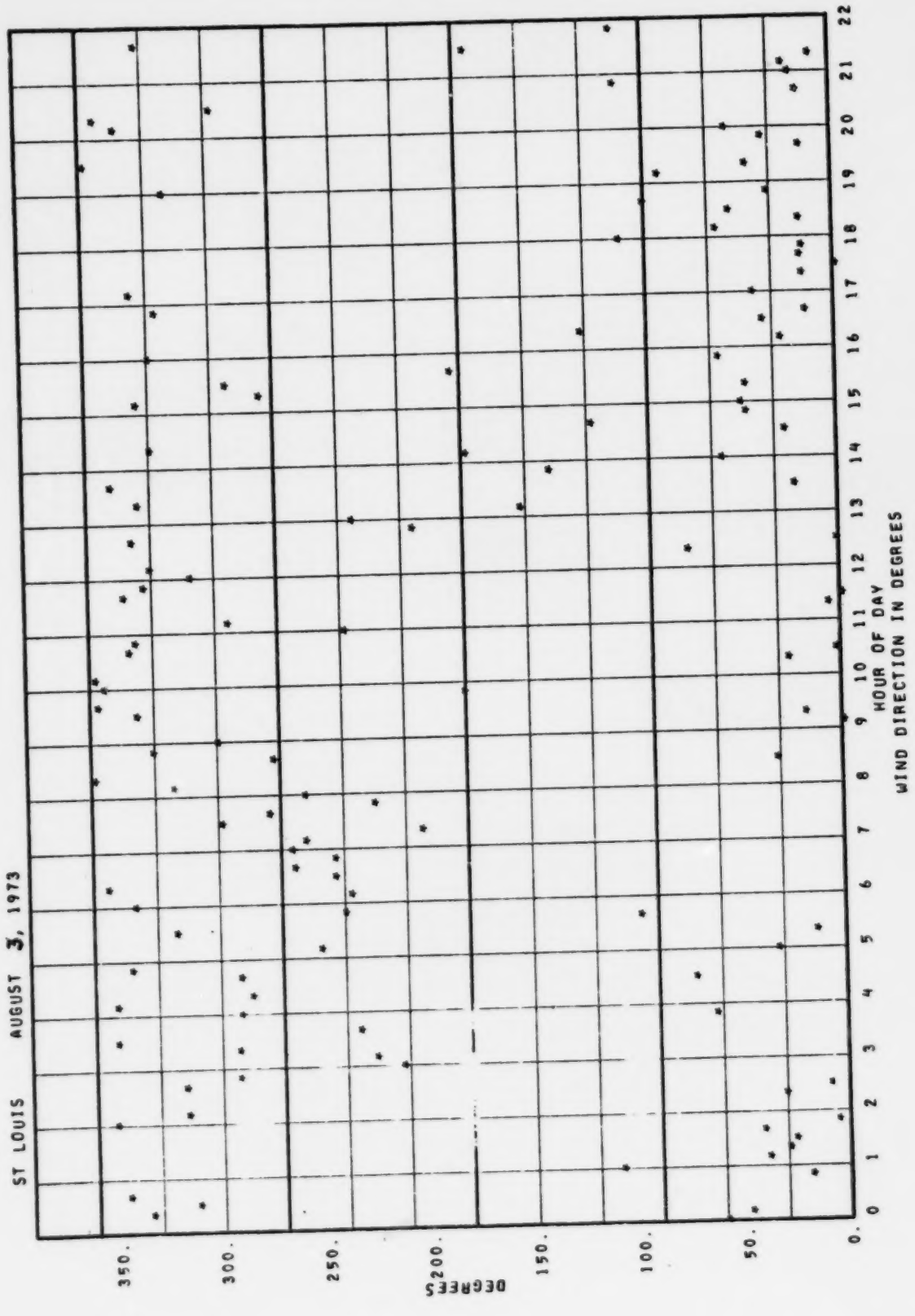

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 2, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 10.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

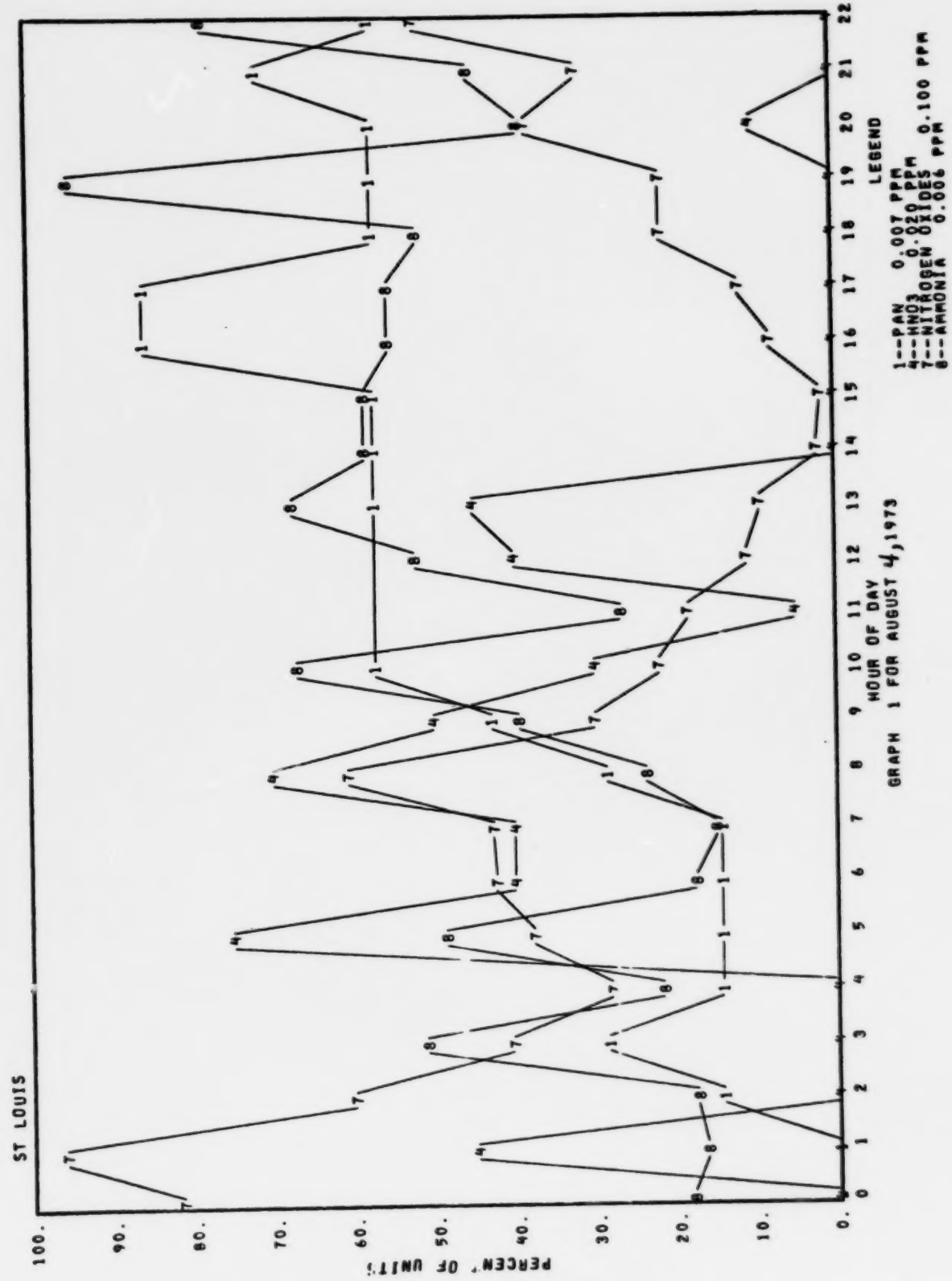

ST LOUIS AUGUST 2, 1973
WIND DIRECTION IN DEGREES
DEGREES
HOUR OF DAY
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

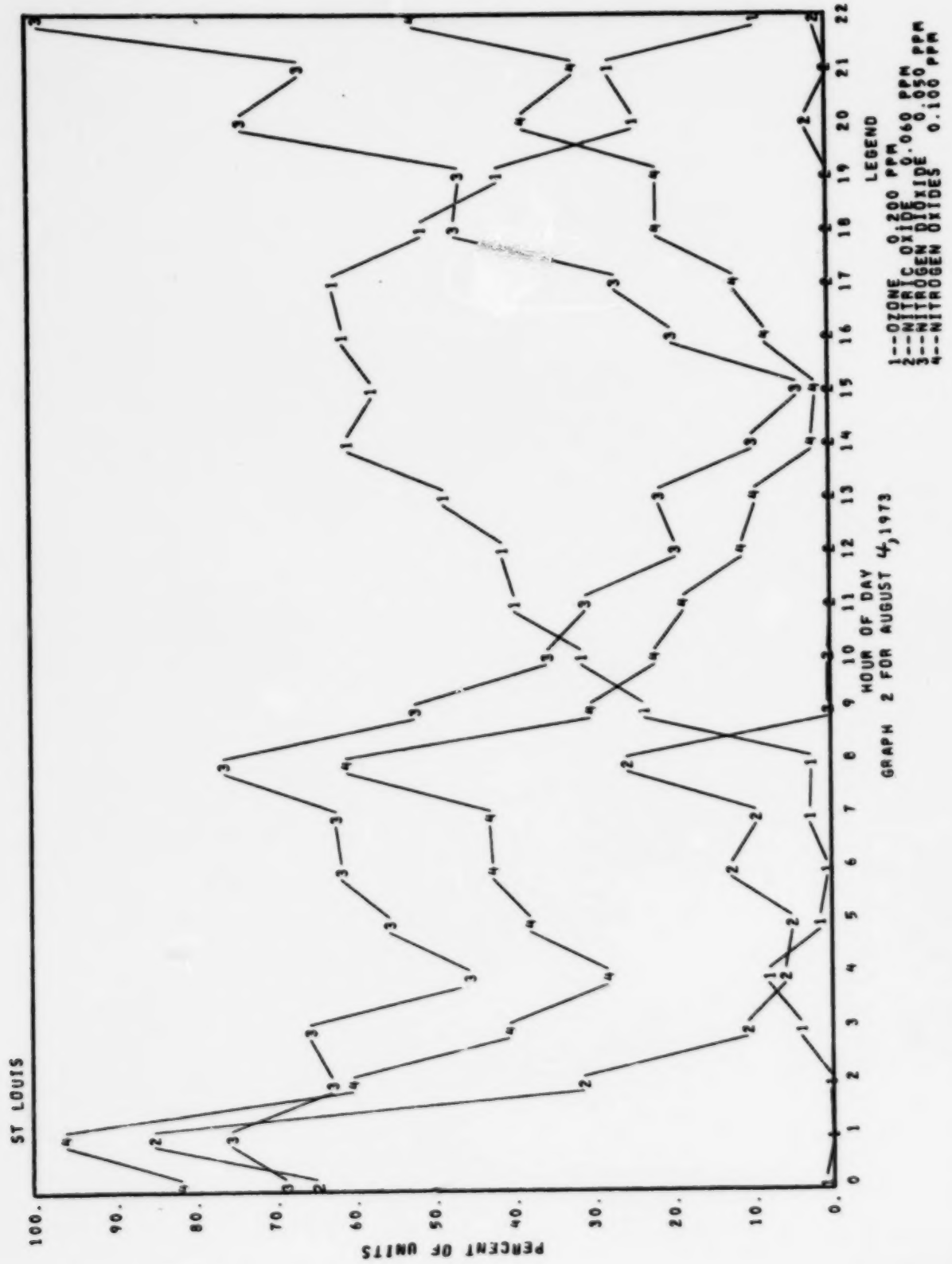

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 3, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.080 PPM
8--AMMONIA 0.004 PPM

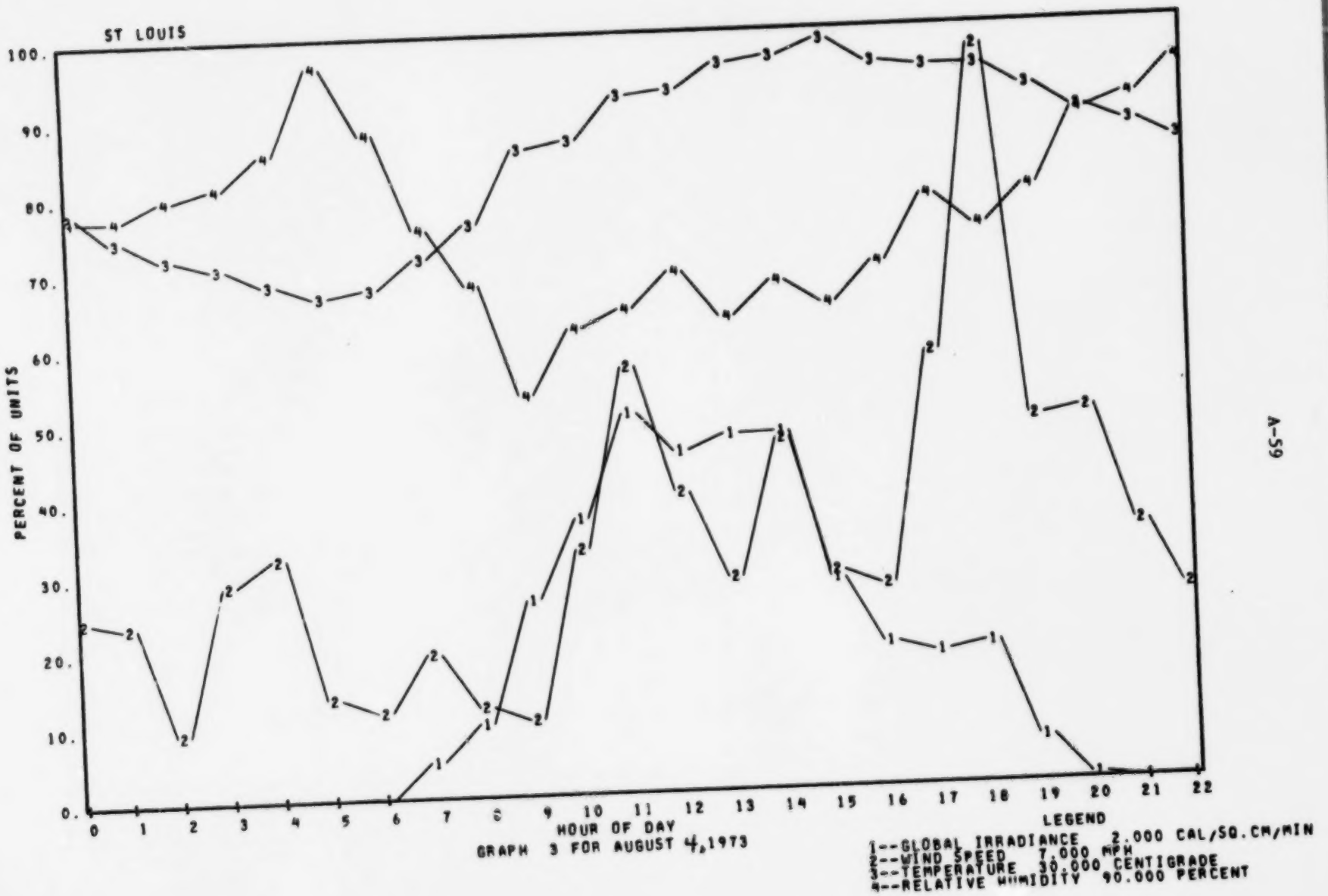

ST LOUIS
PERCENT OF UNIT.
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 3, 1973
LEGEND
1--OZONE 0.090 PPM
2--NITRIC OXIDE 0.040 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.080 PPM

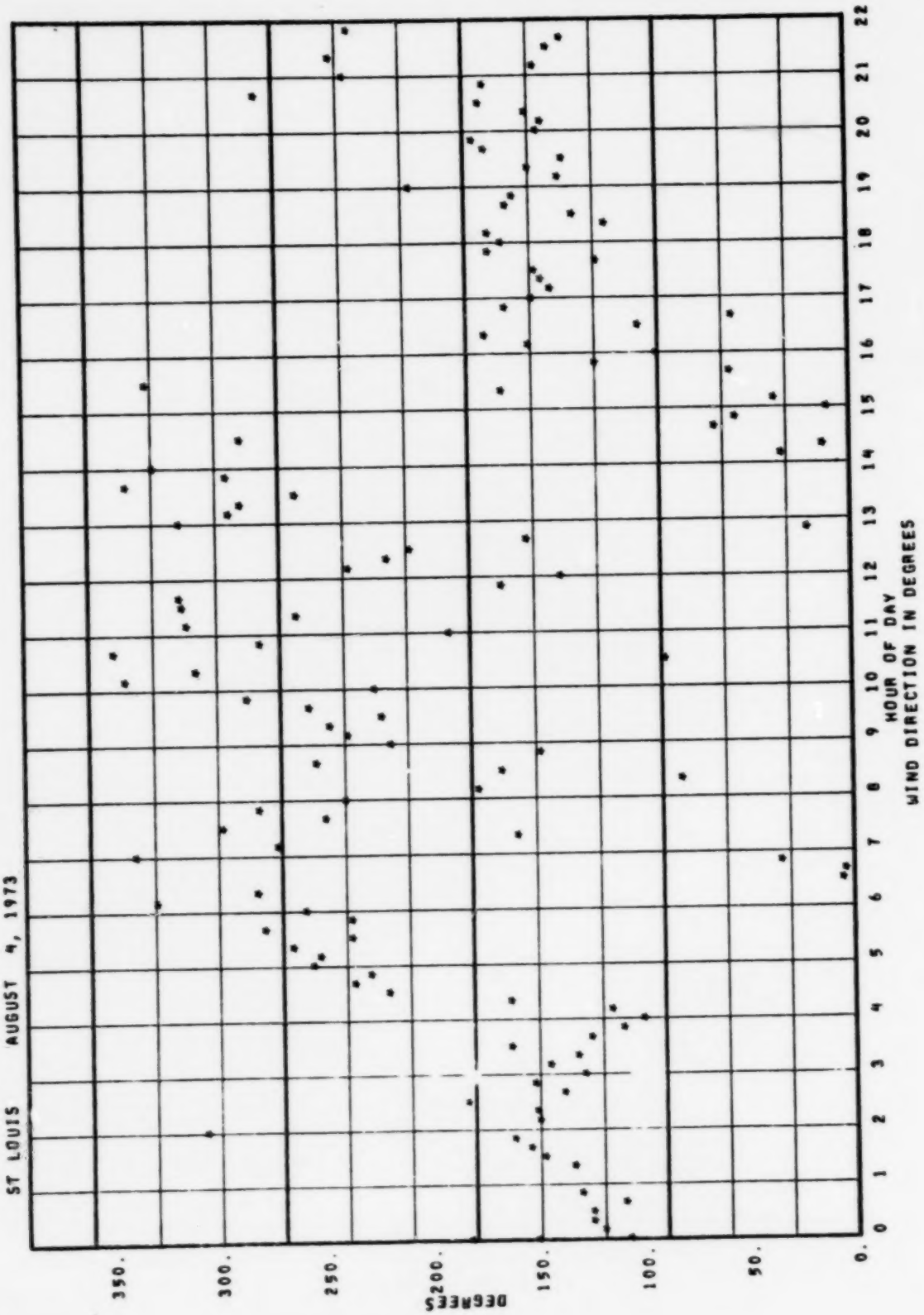

ST LOUIS
PERCENT OF UNITS
HOUR OF DAY
GRAPH 3 FOR AUGUST 3, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 5.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 100.000 PERCENT

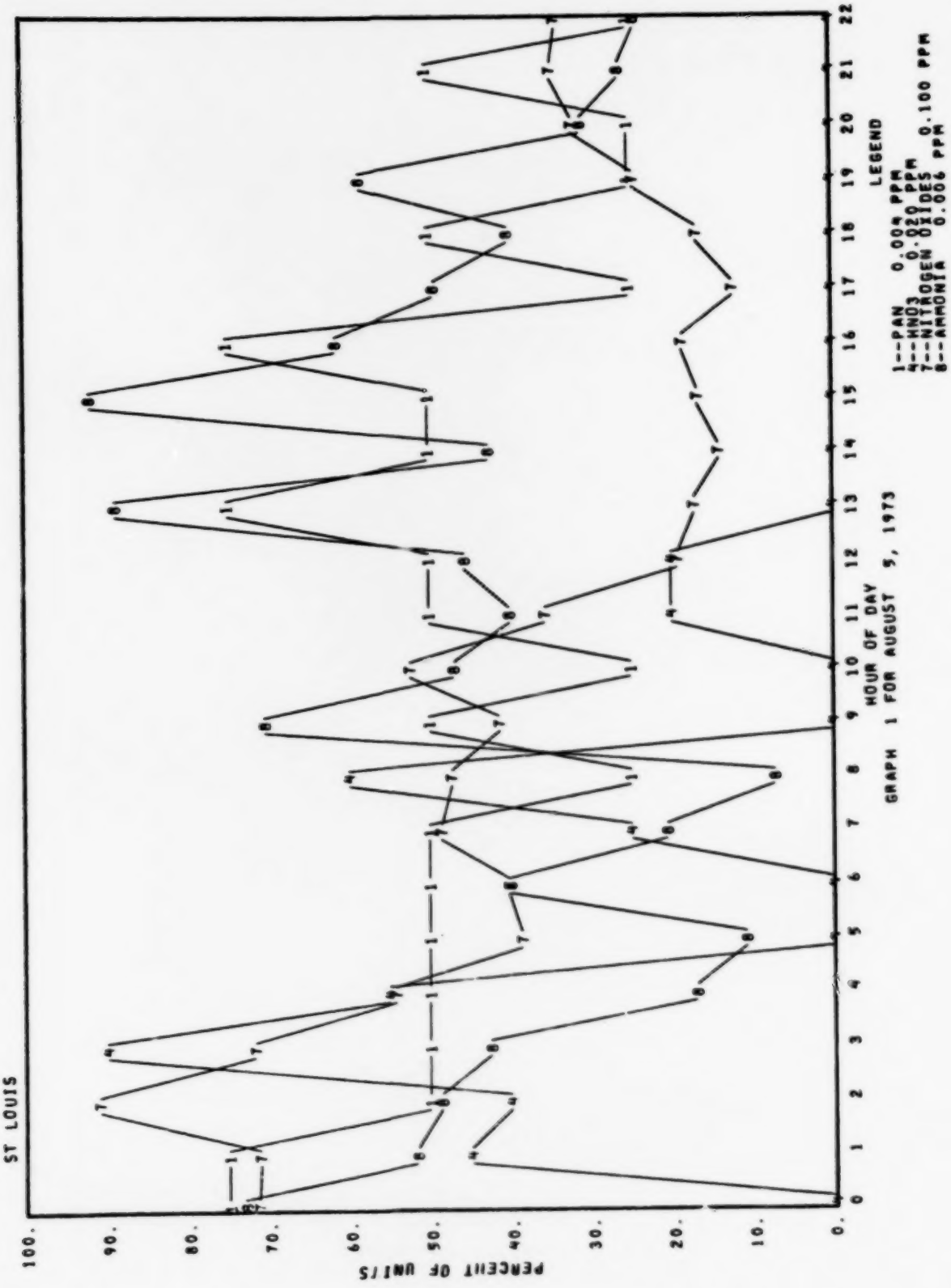

ST LOUIS AUGUST 3, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

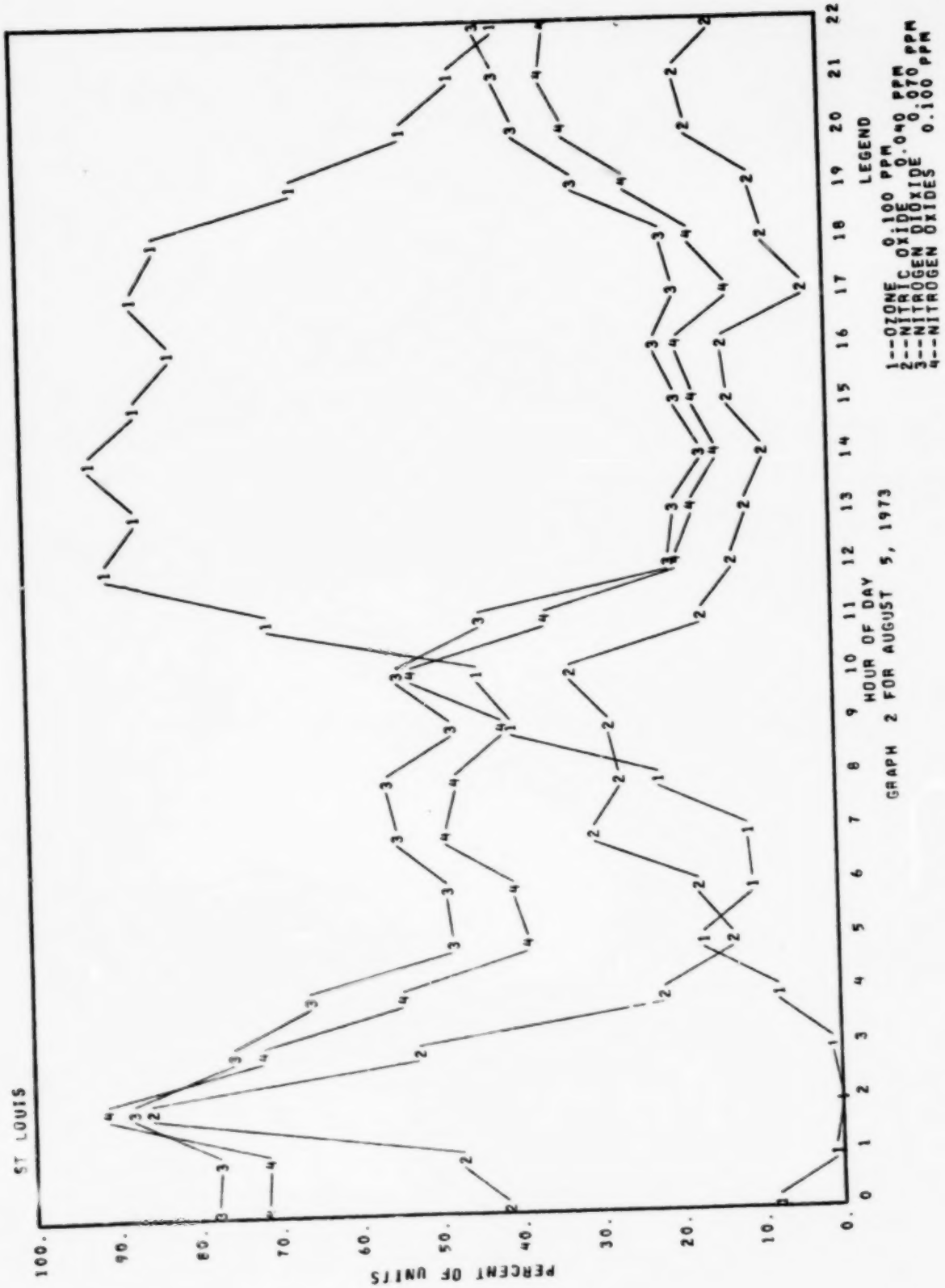

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 4,1973
LEGEND
1--PAN 0.007 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.100 PPM
8--AMMONIA 0.006 PPM


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 4,1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.060 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.100 PPM

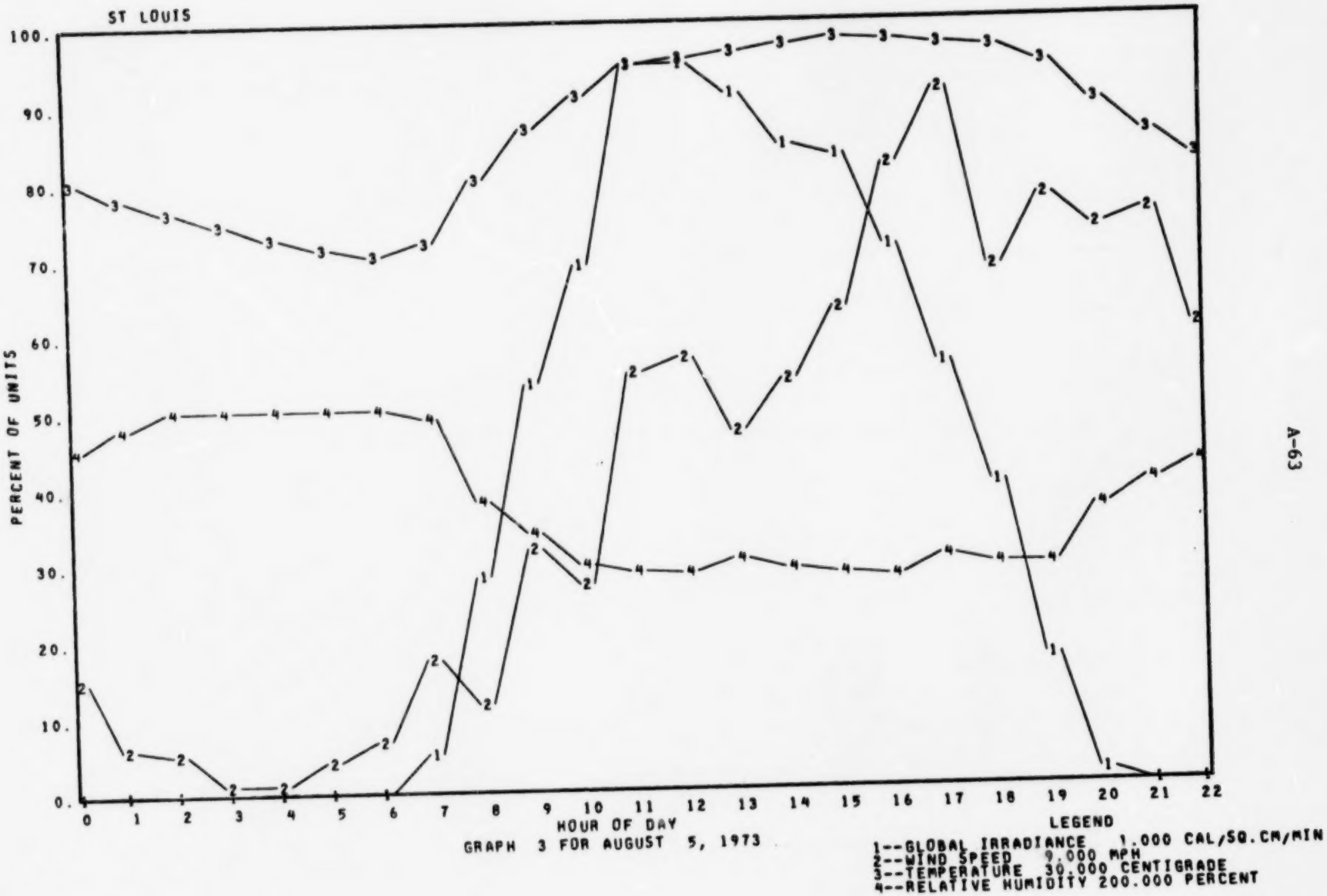

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 4,1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 90.000 PERCENT


ST LOUIS AUGUST 4, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

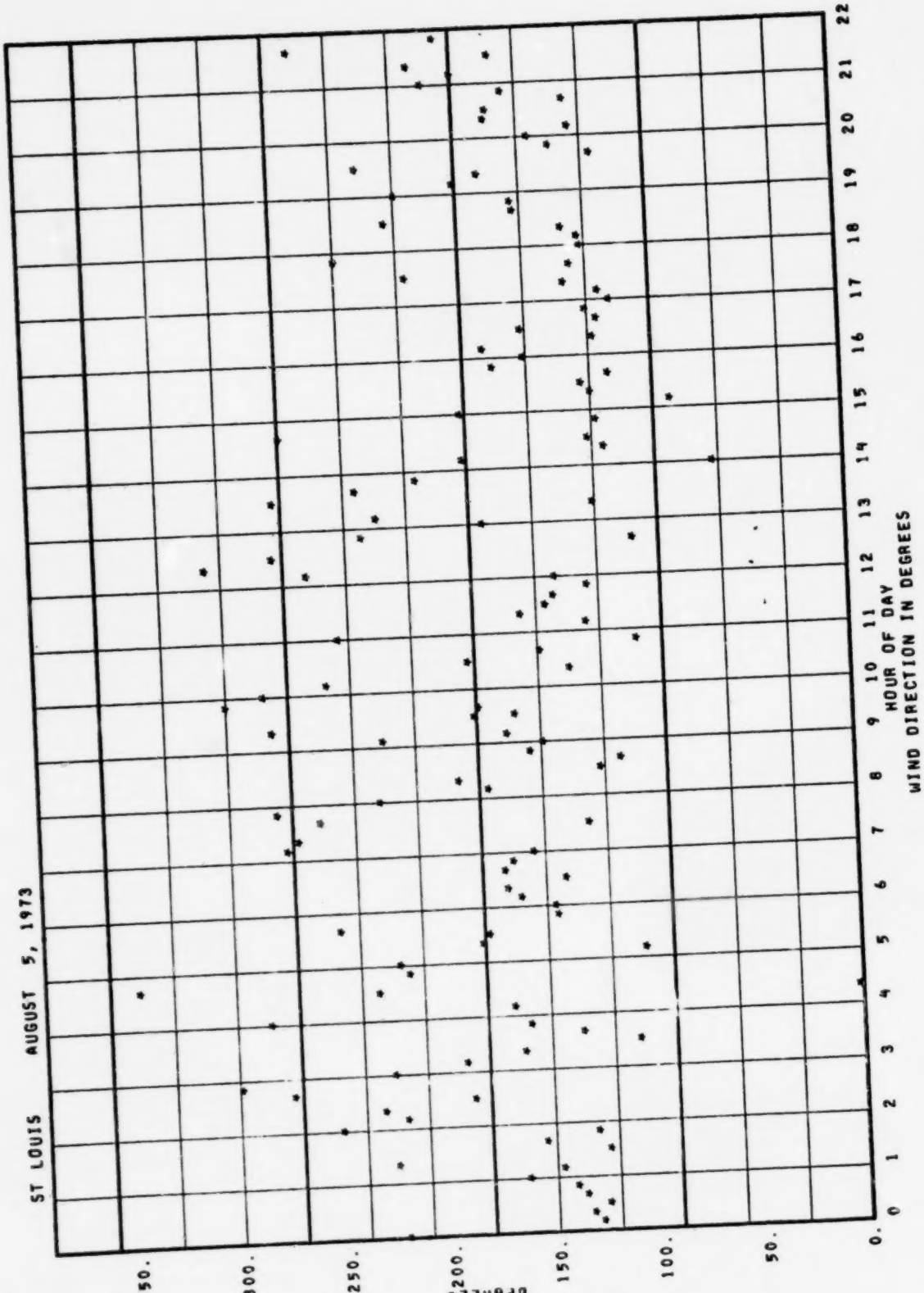

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 5, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.100 PPM
8--AMMONIA 0.006 PPM

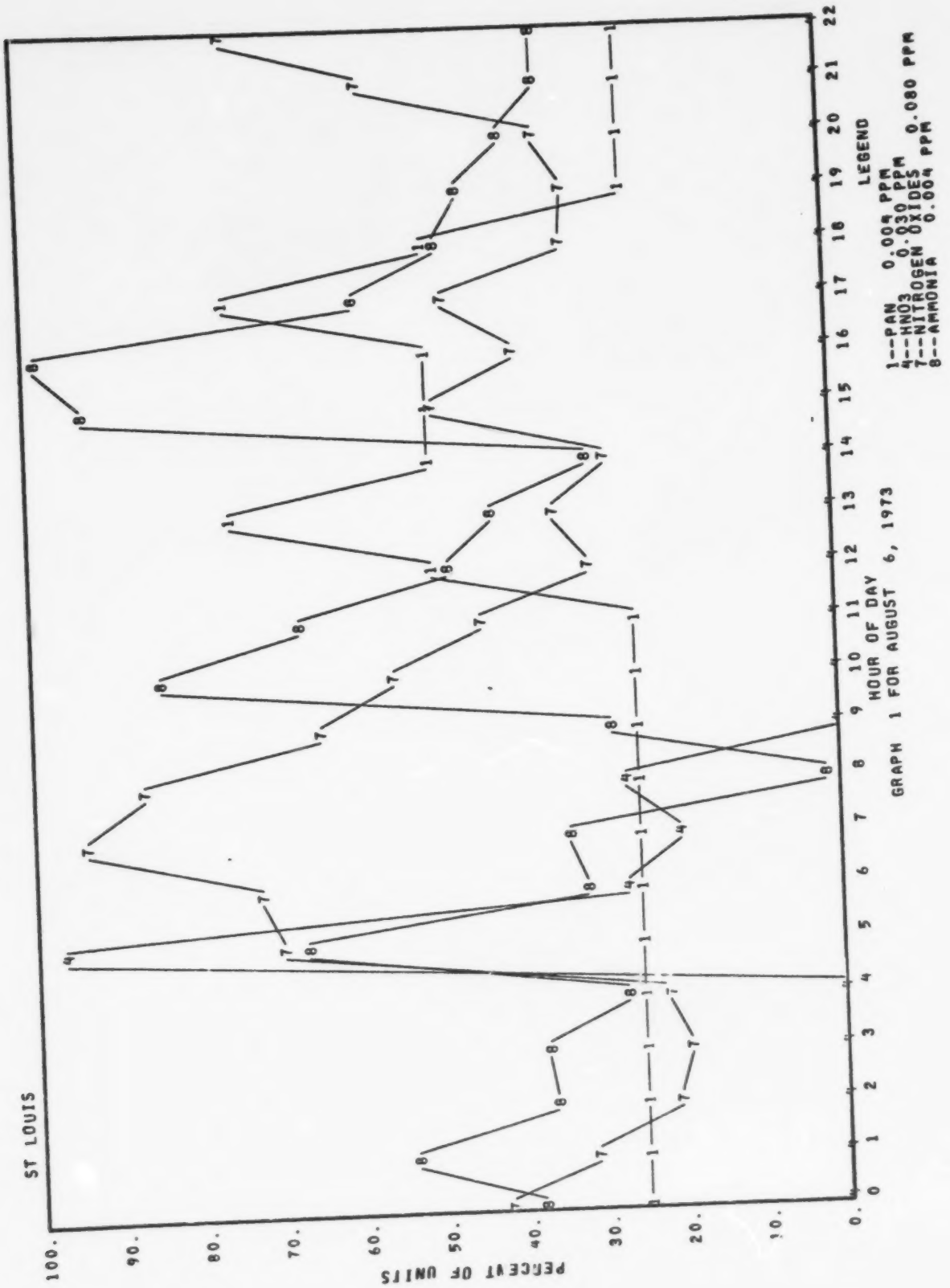


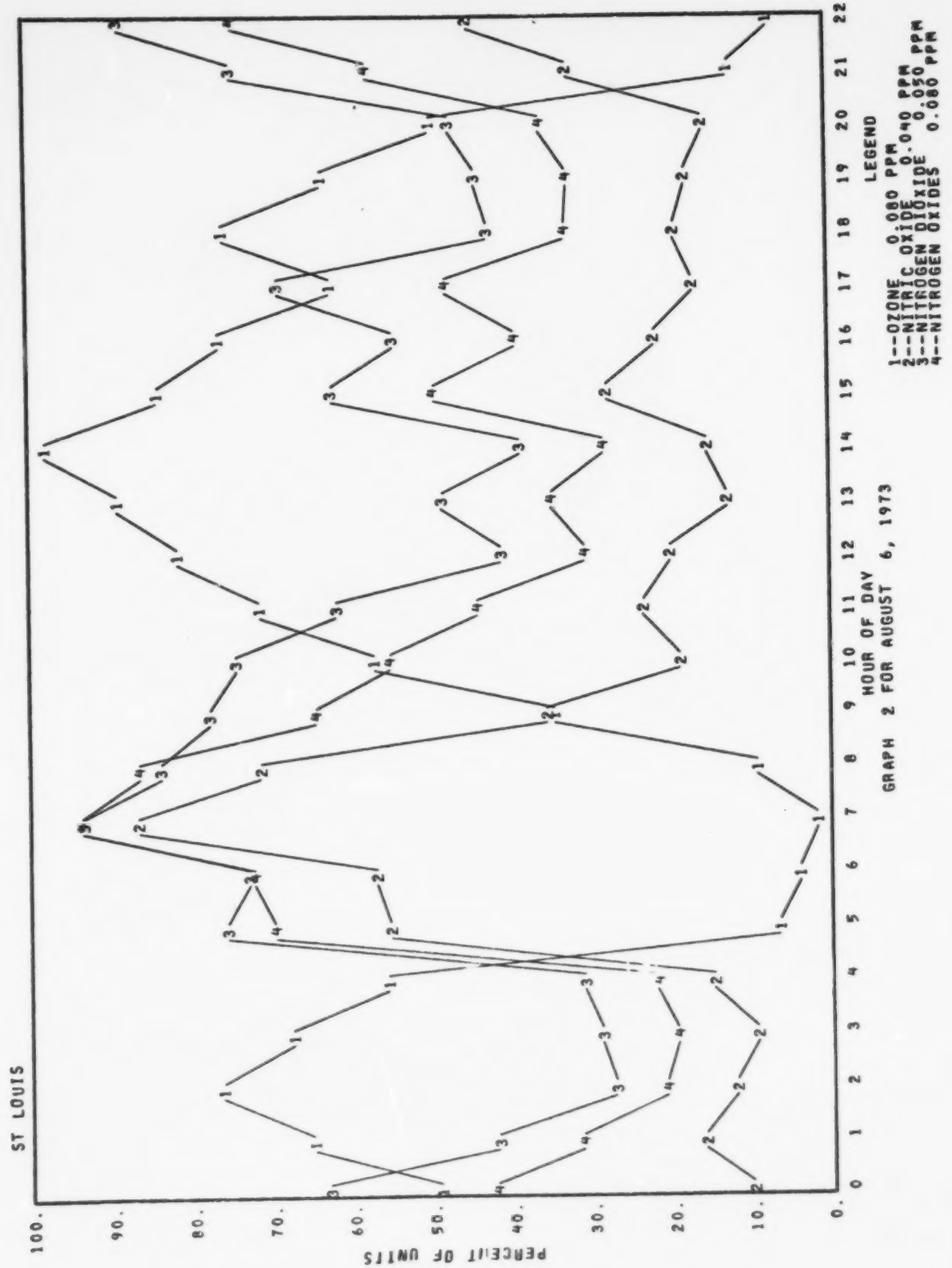
GRAPH 2 FOR AUGUST 5, 1973

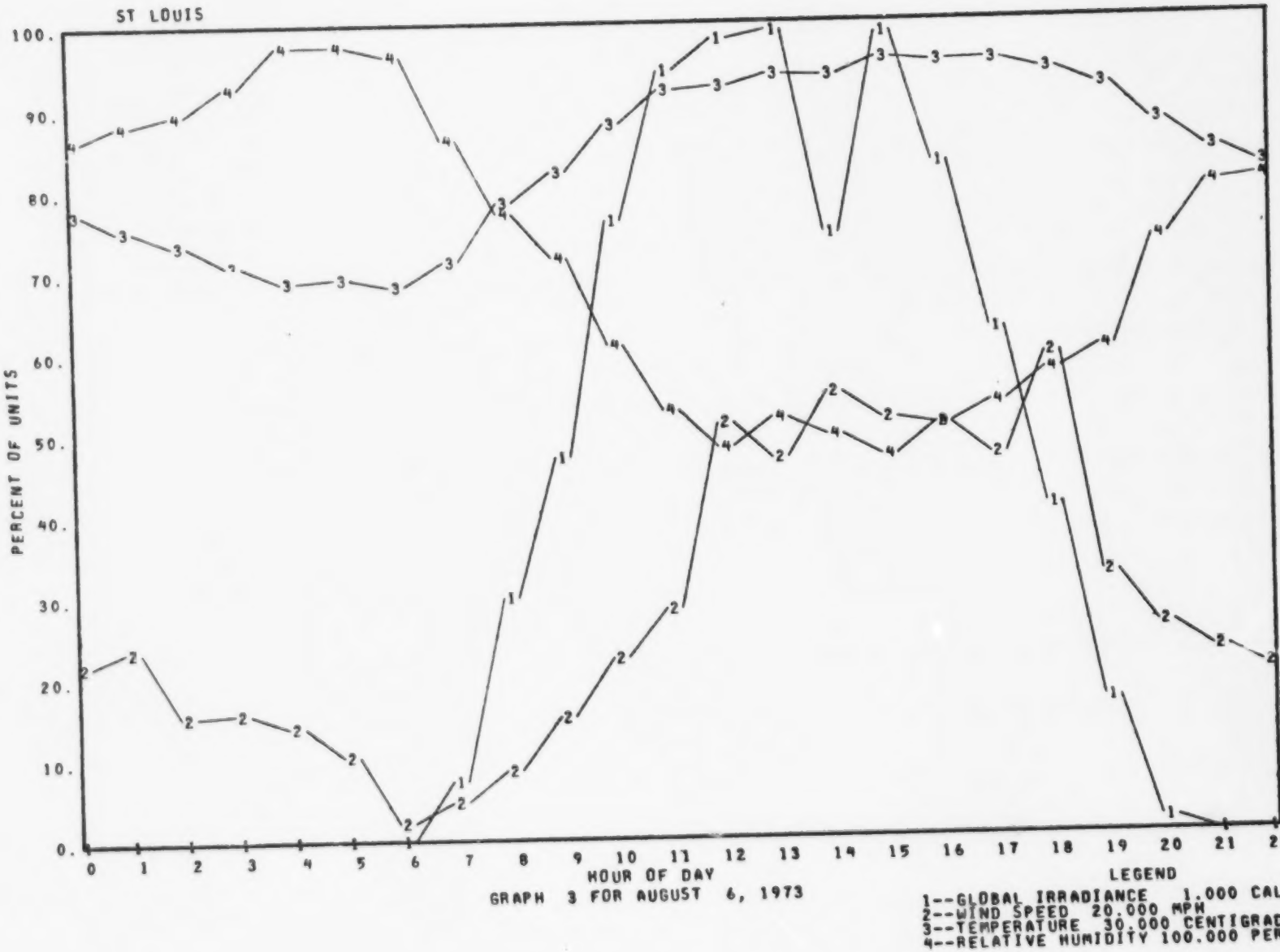


GRAPH 3 FOR AUGUST 5, 1973


ST LOUIS AUGUST 5, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 6, 1973
LEGEND
1--PAN 0.004 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.080 PPM
8--AMMONIA 0.004 PPM

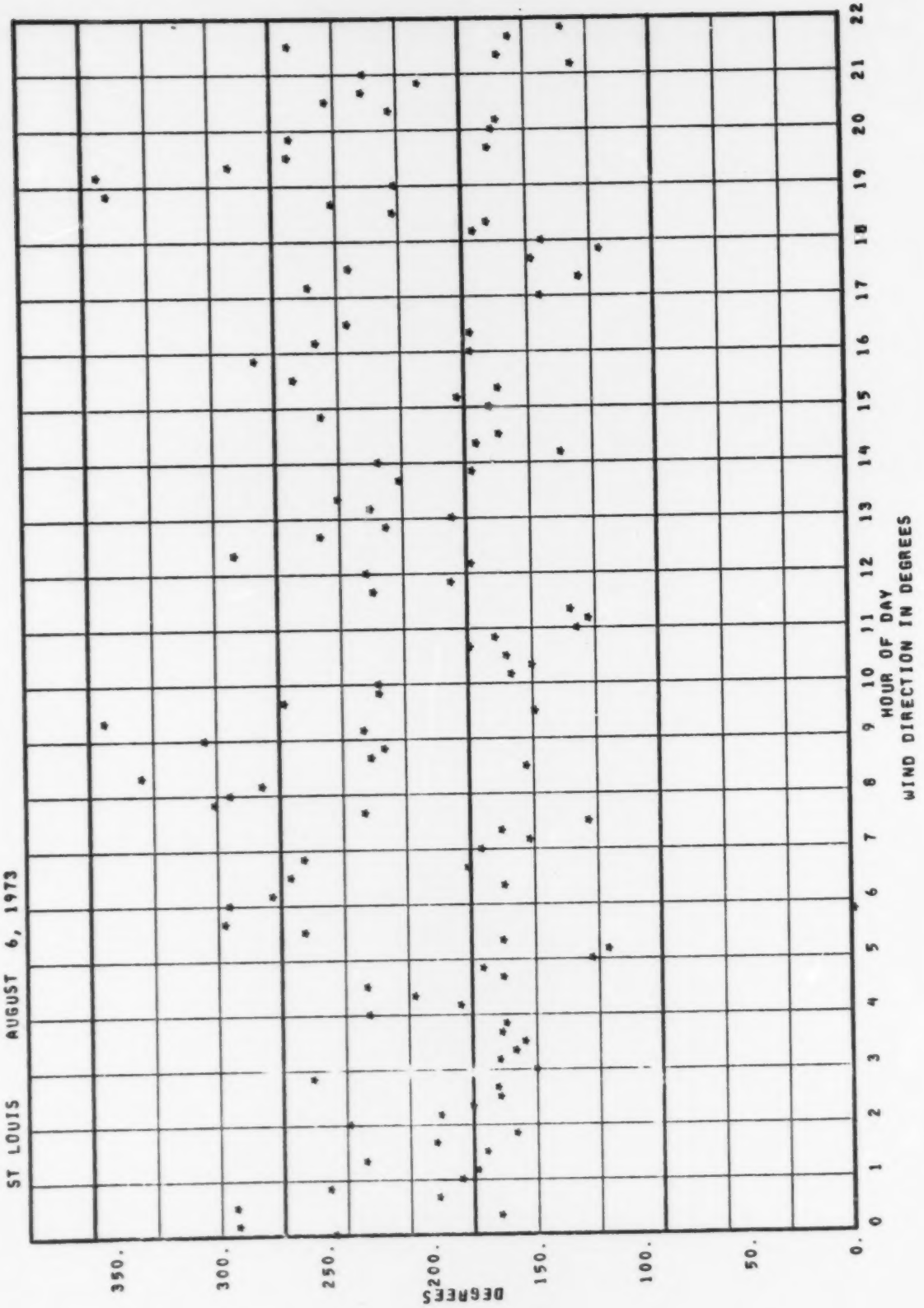

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 6, 1973
LEGEND
1--OZONE 0.080 PPM
2--NITRIC OXIDE 0.040 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.080 PPM

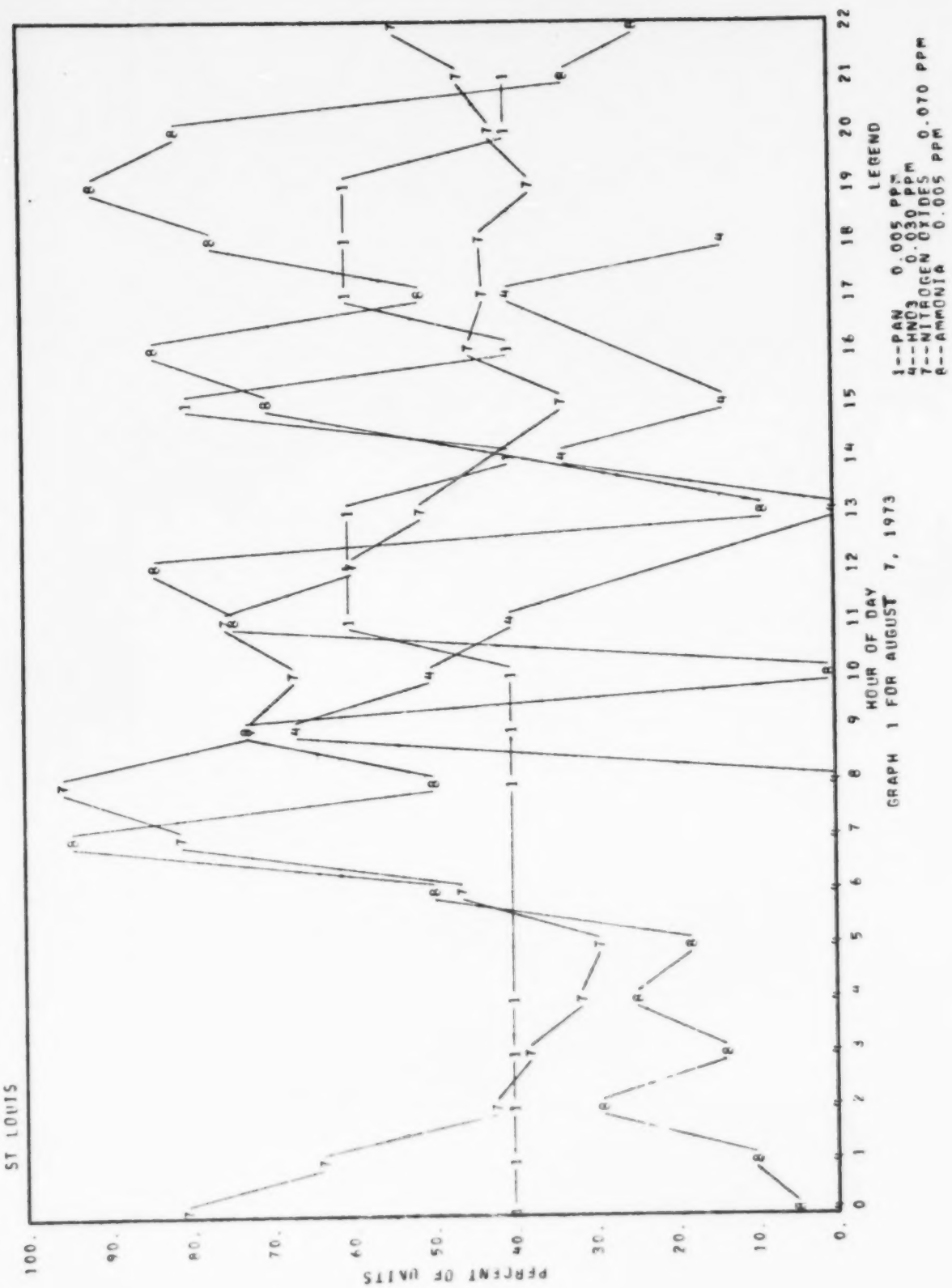


GRAPH 3 FOR AUGUST 6, 1973

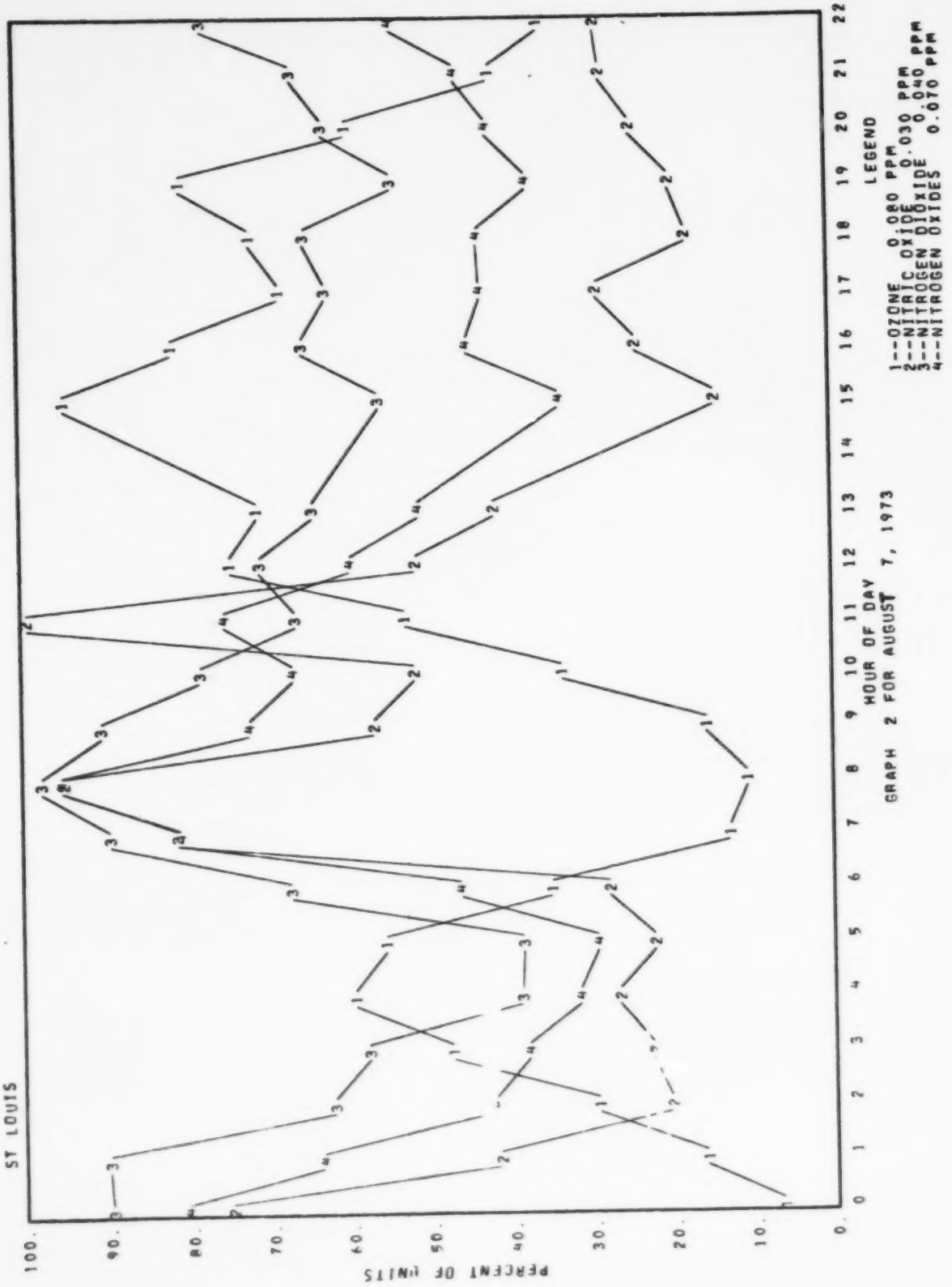
LEGEND

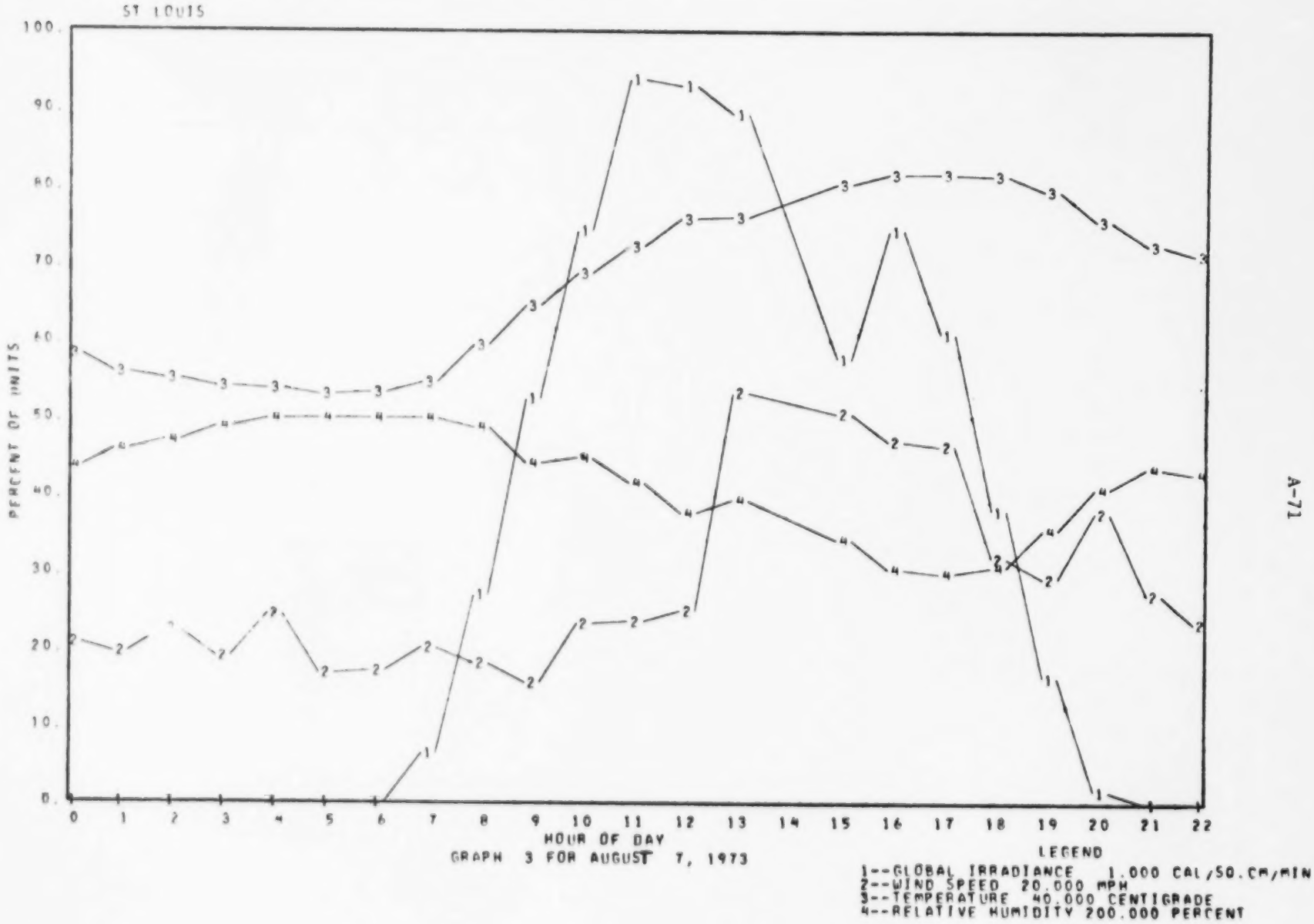
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MI
2--WIND SPEED 20.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 100.000 PERCENT

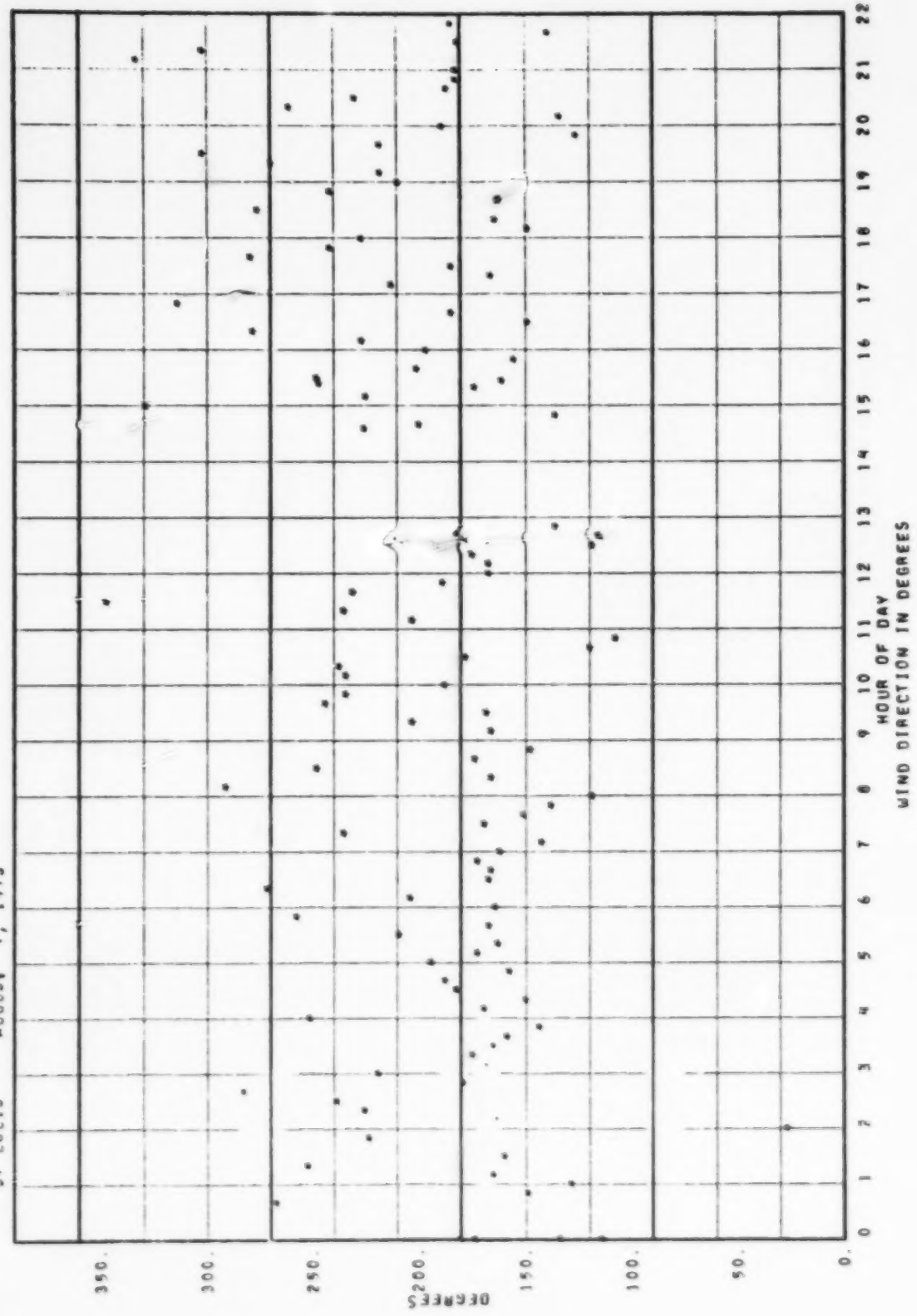

ST LOUIS AUGUST 6, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

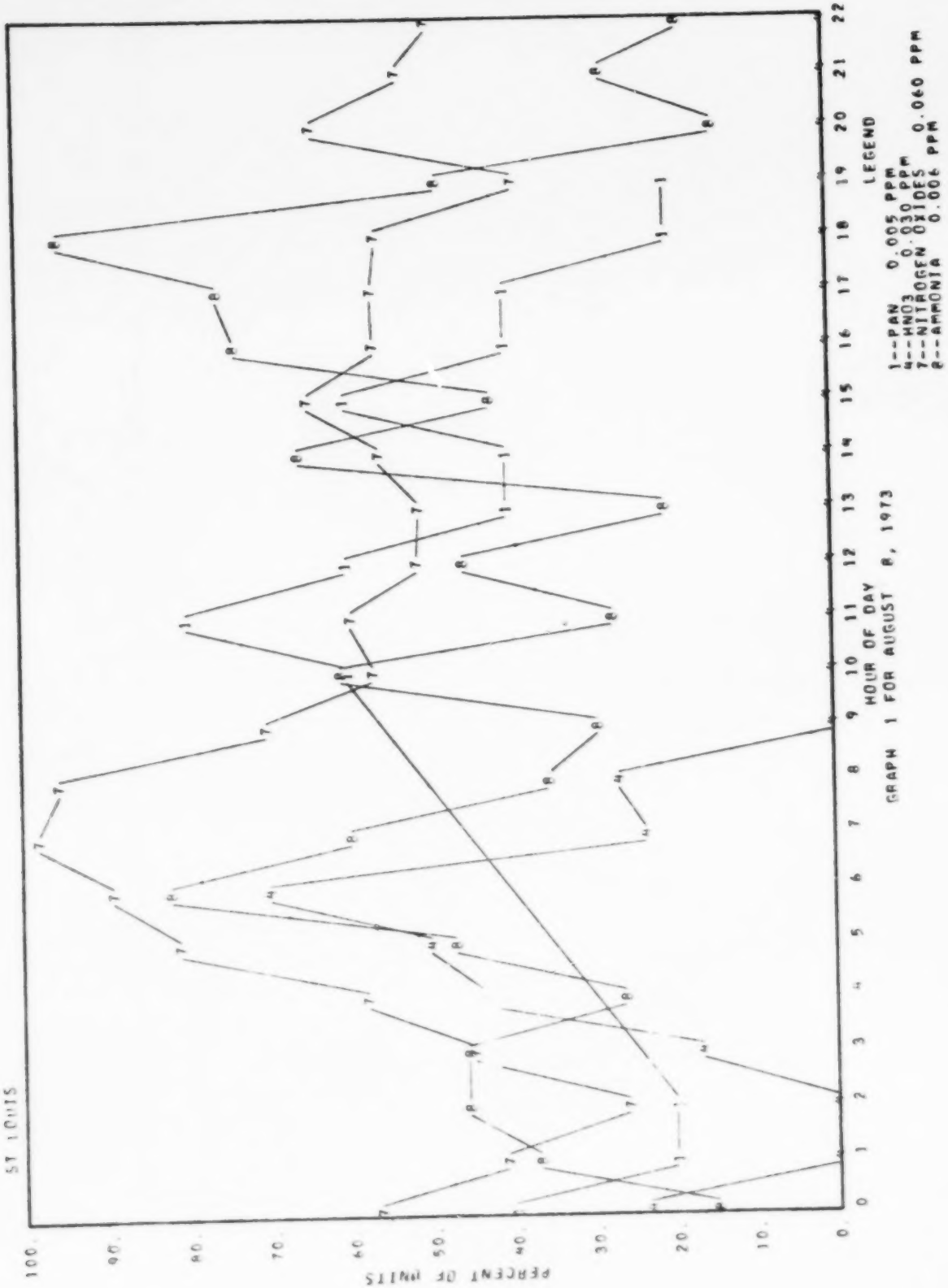


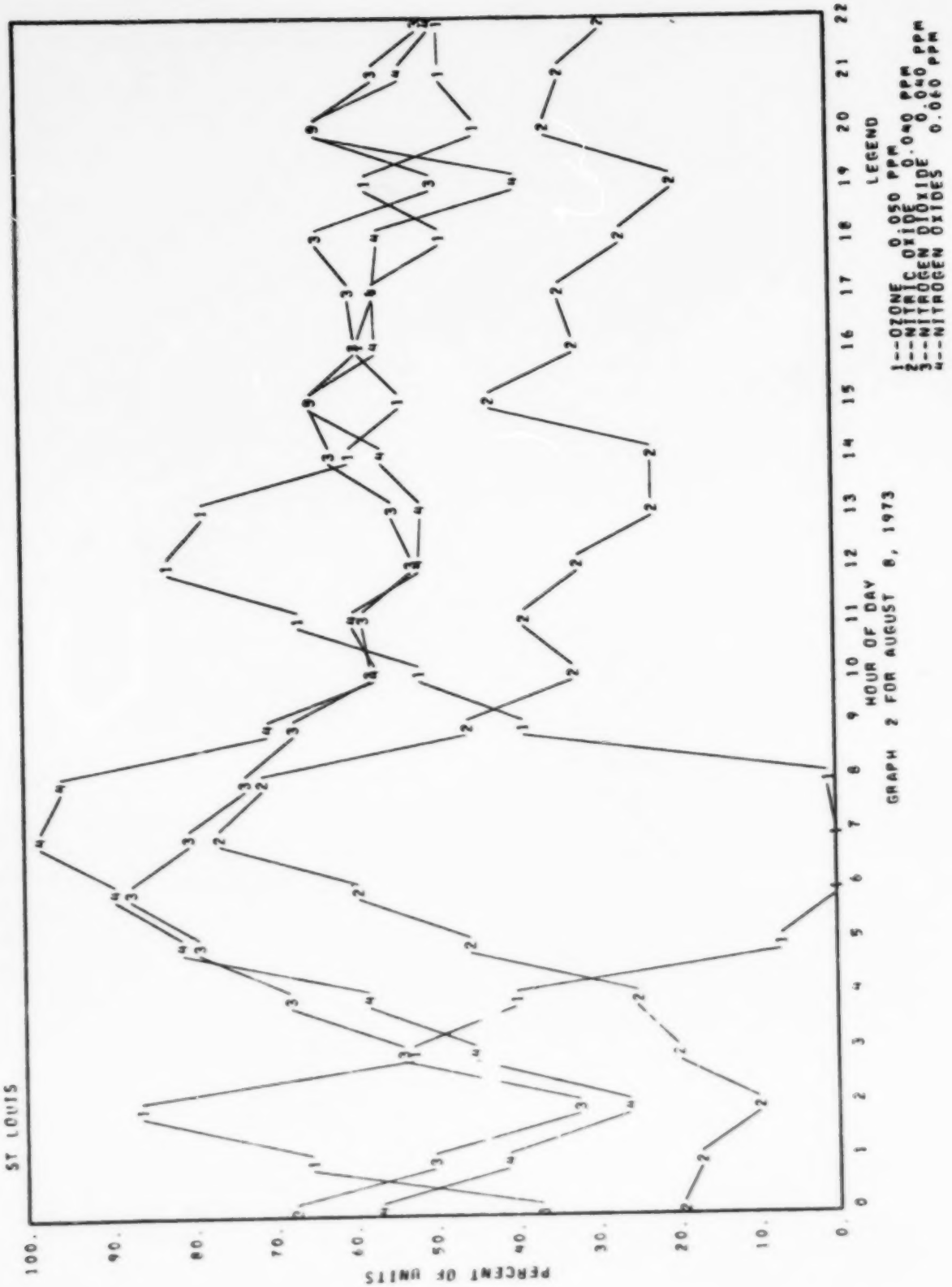
GRAPH 1 FOR AUGUST 7, 1973


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 7, 1973
LEGEND
1--OZONE 0.080 PPM
2--NITRIC OXIDE 0.030 PPM
3--NITROGEN DIOXIDE 0.040 PPM
4--NITROGEN OXIDES 0.070 PPM

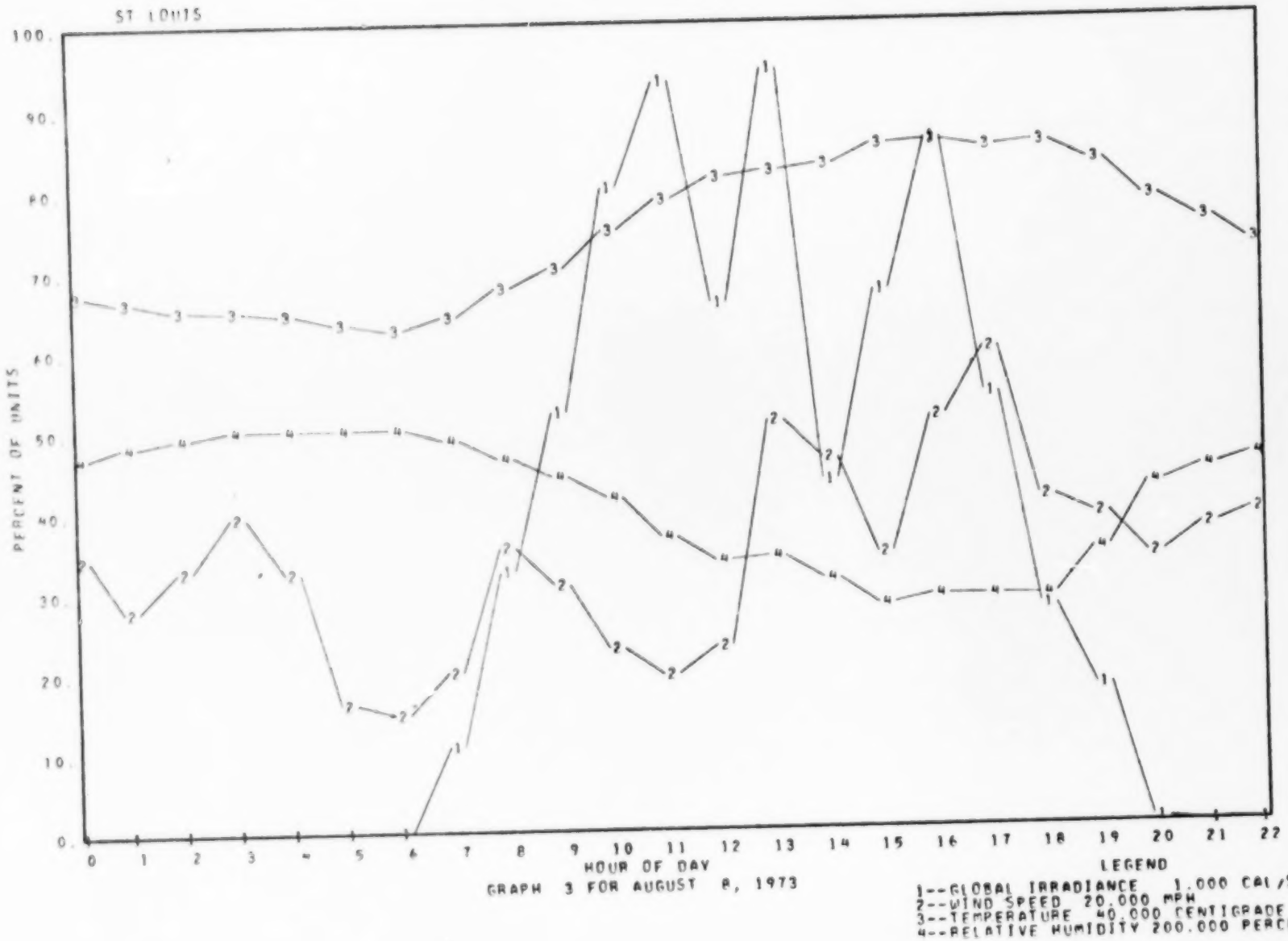

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 7, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--TEMPERATURE 40.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

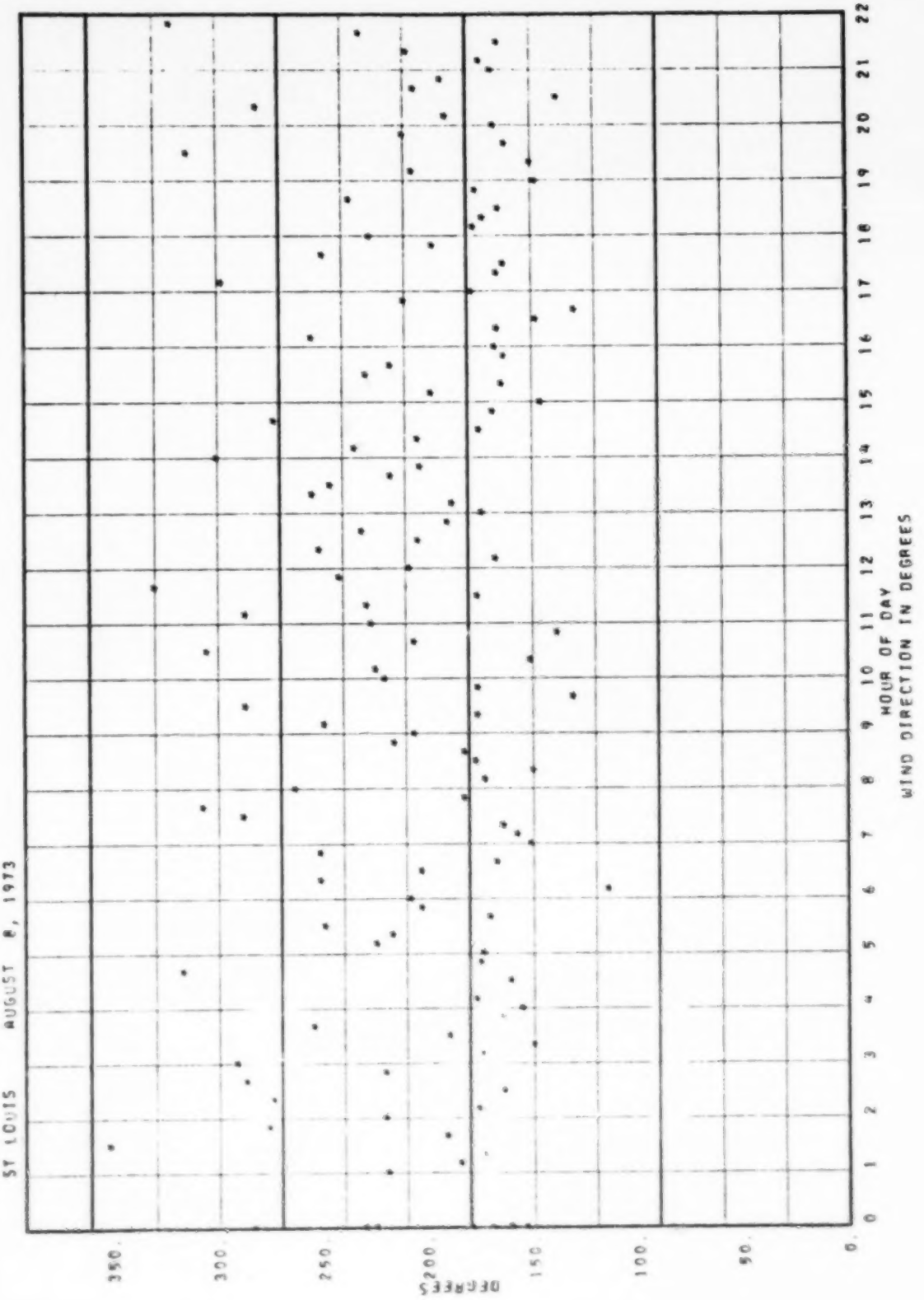

ST LOUIS AUGUST 7, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

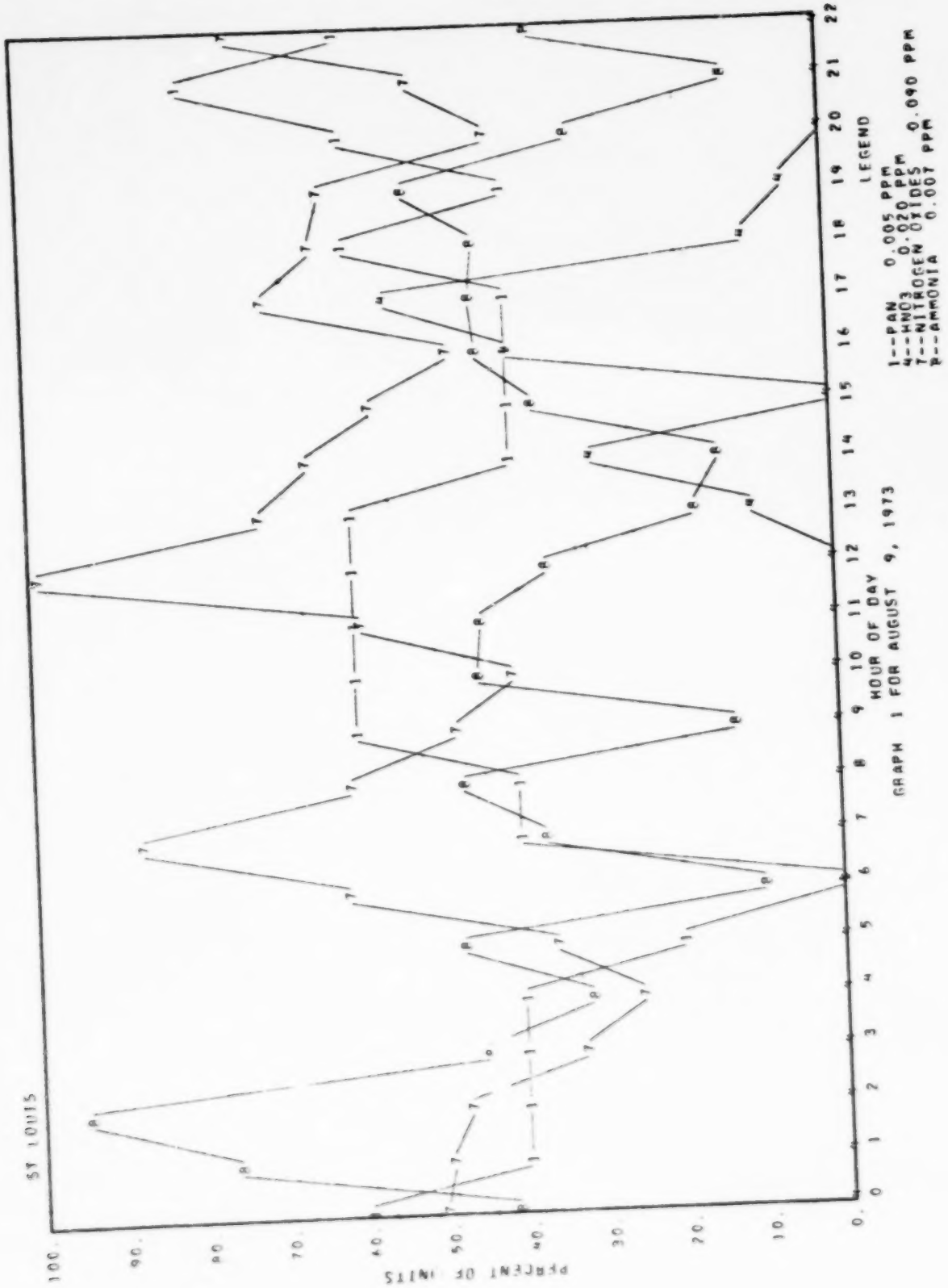

ST LOUIS
PERCENT OF LIMITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 8, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.060 PPM
8--AMMONIA 0.004 PPM

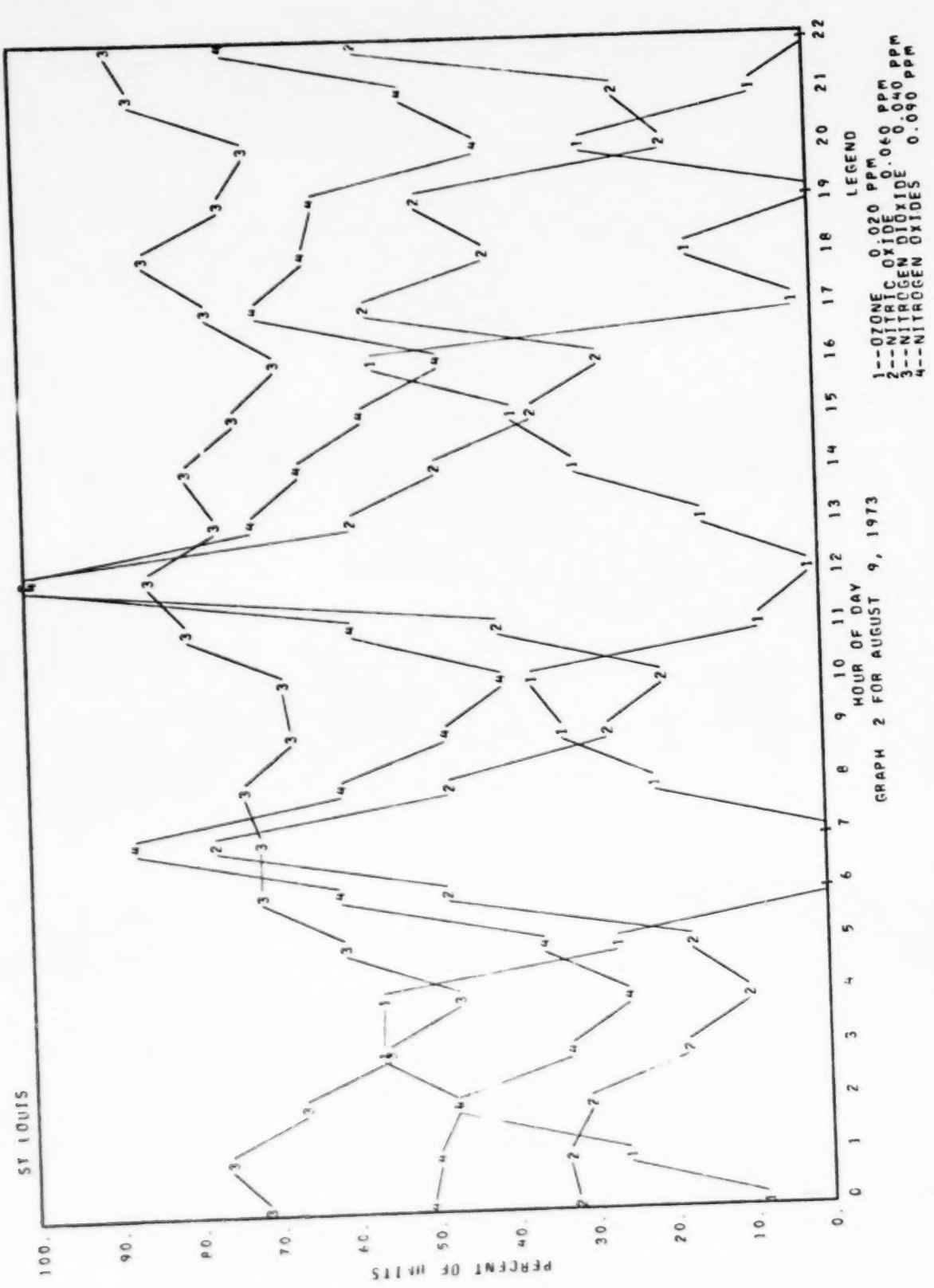


GRAPH 2 FOR AUGUST 8, 1973

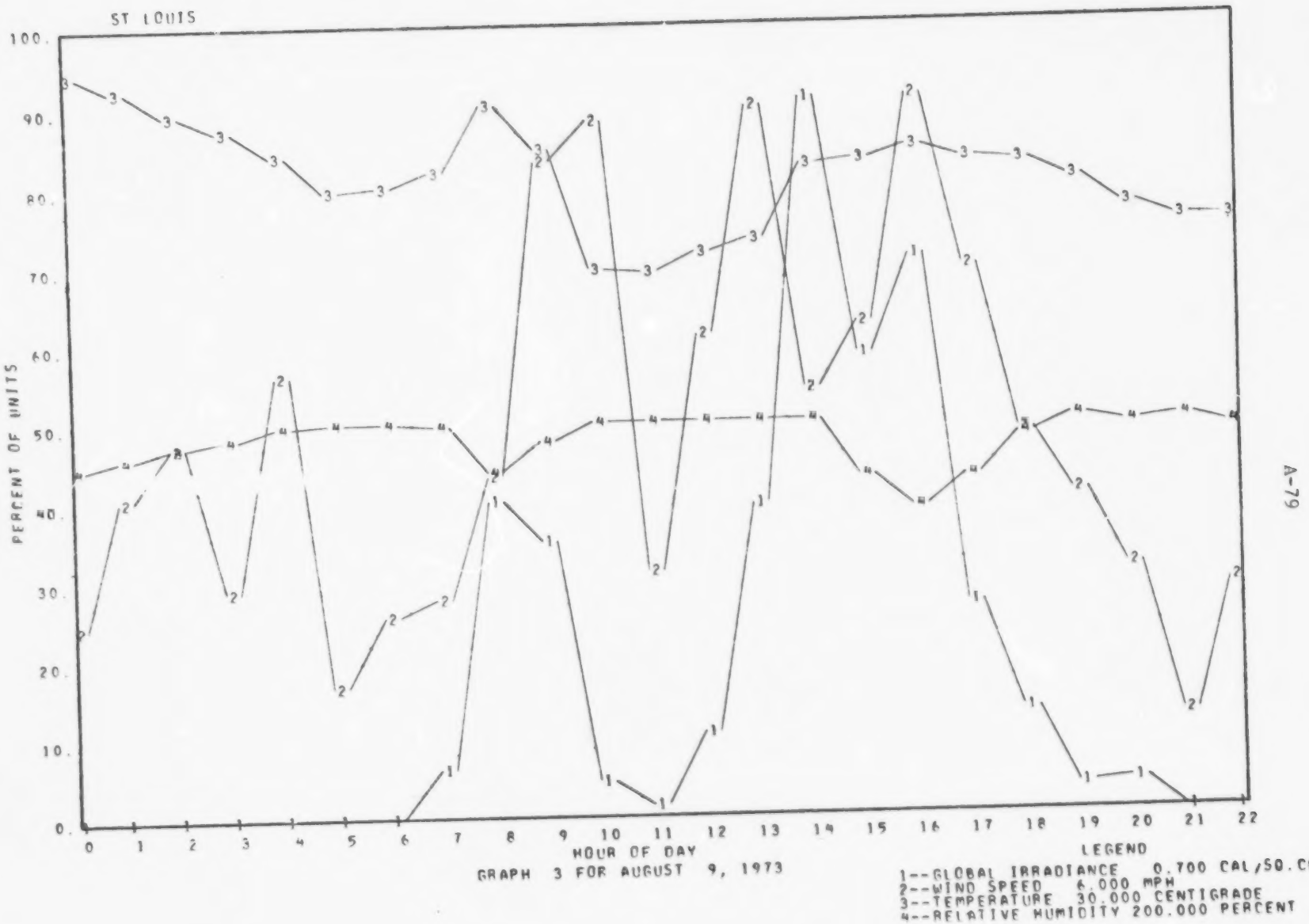

ST LOUIS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 8, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--TEMPERATURE 40.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT


ST LOUIS AUGUST 8, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
0.
50.
100.
150.
200.
250.
300.
350.

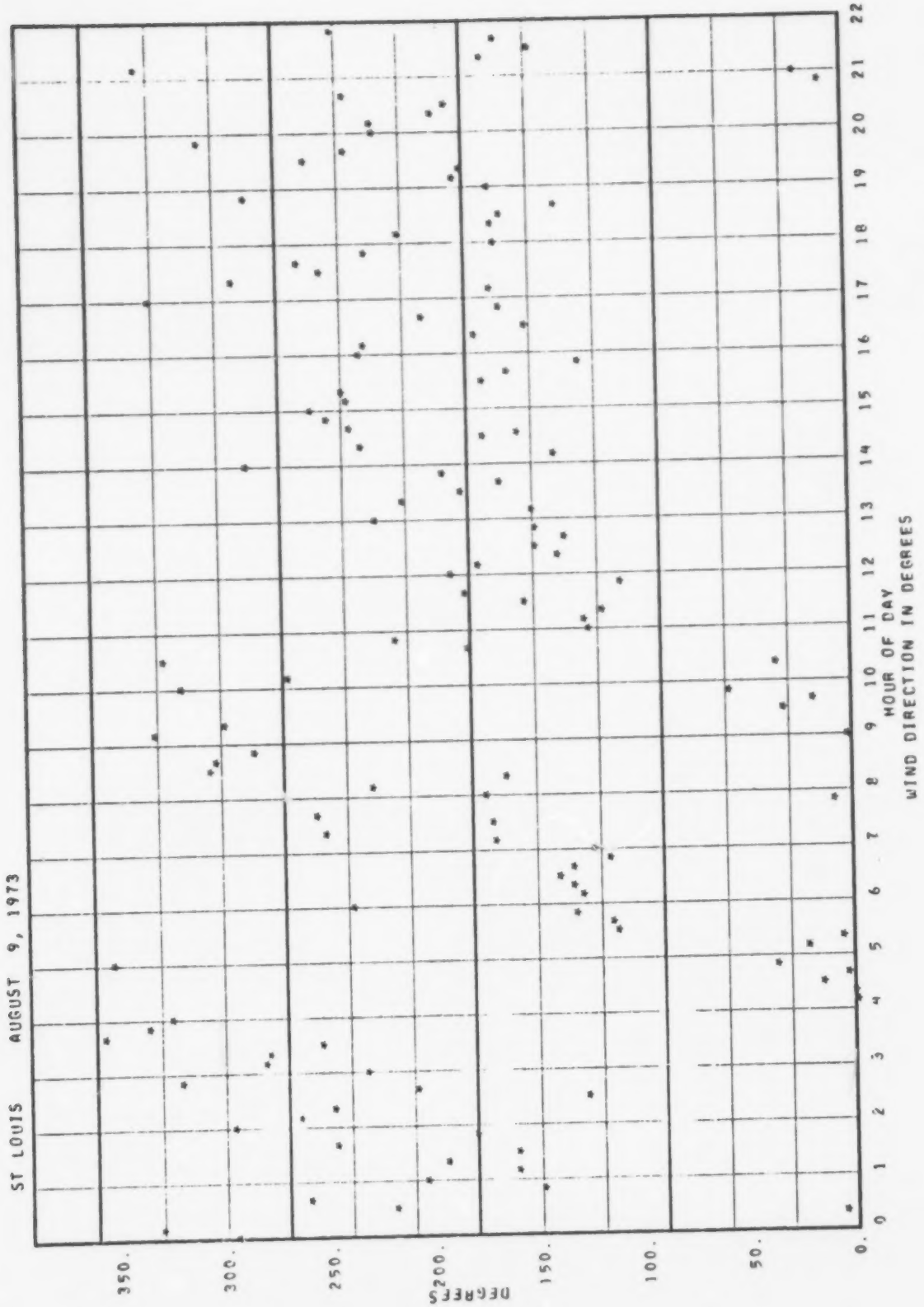

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 9, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.090 PPM
P--AMMONIA 0.007 PPM

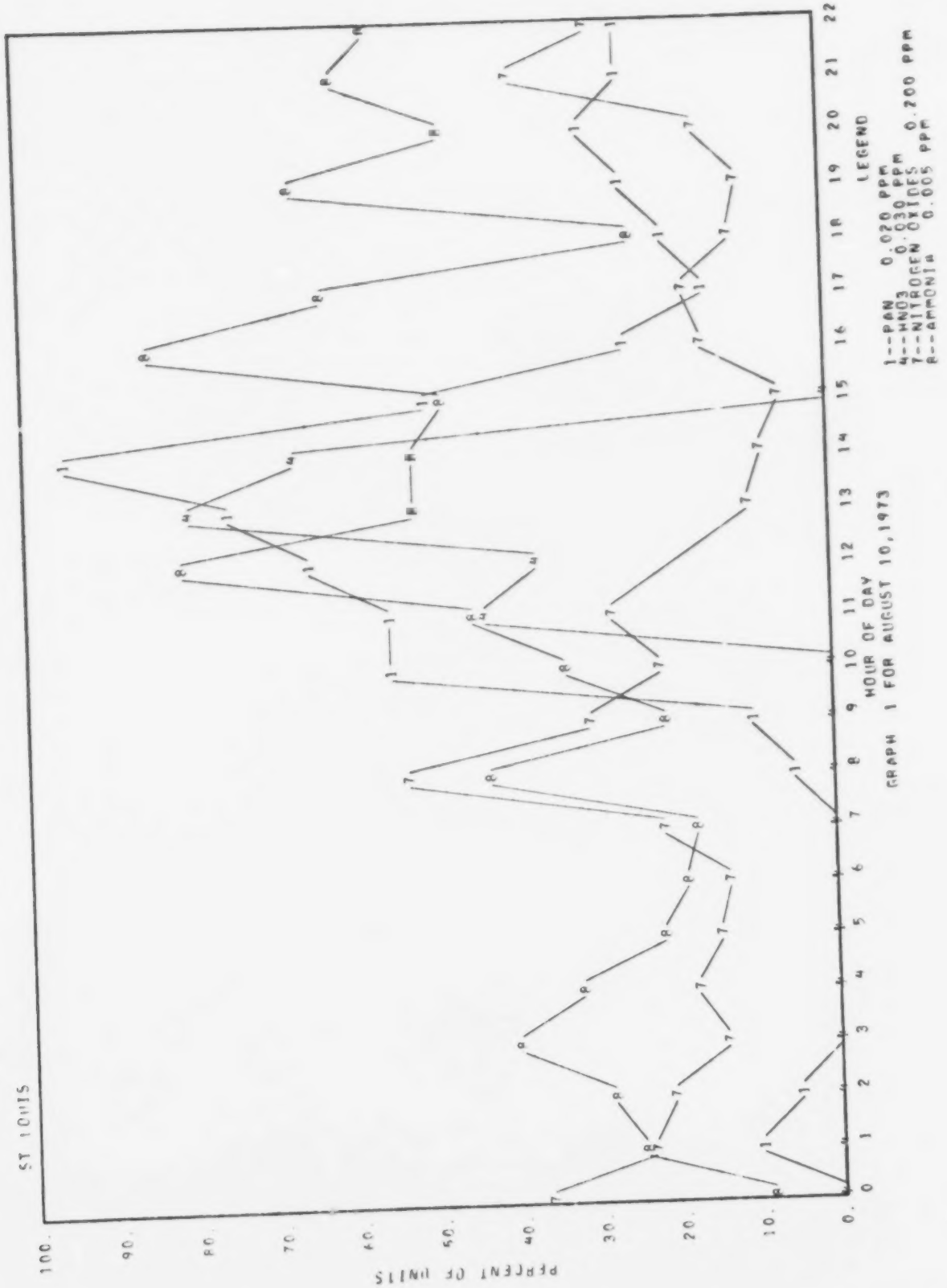


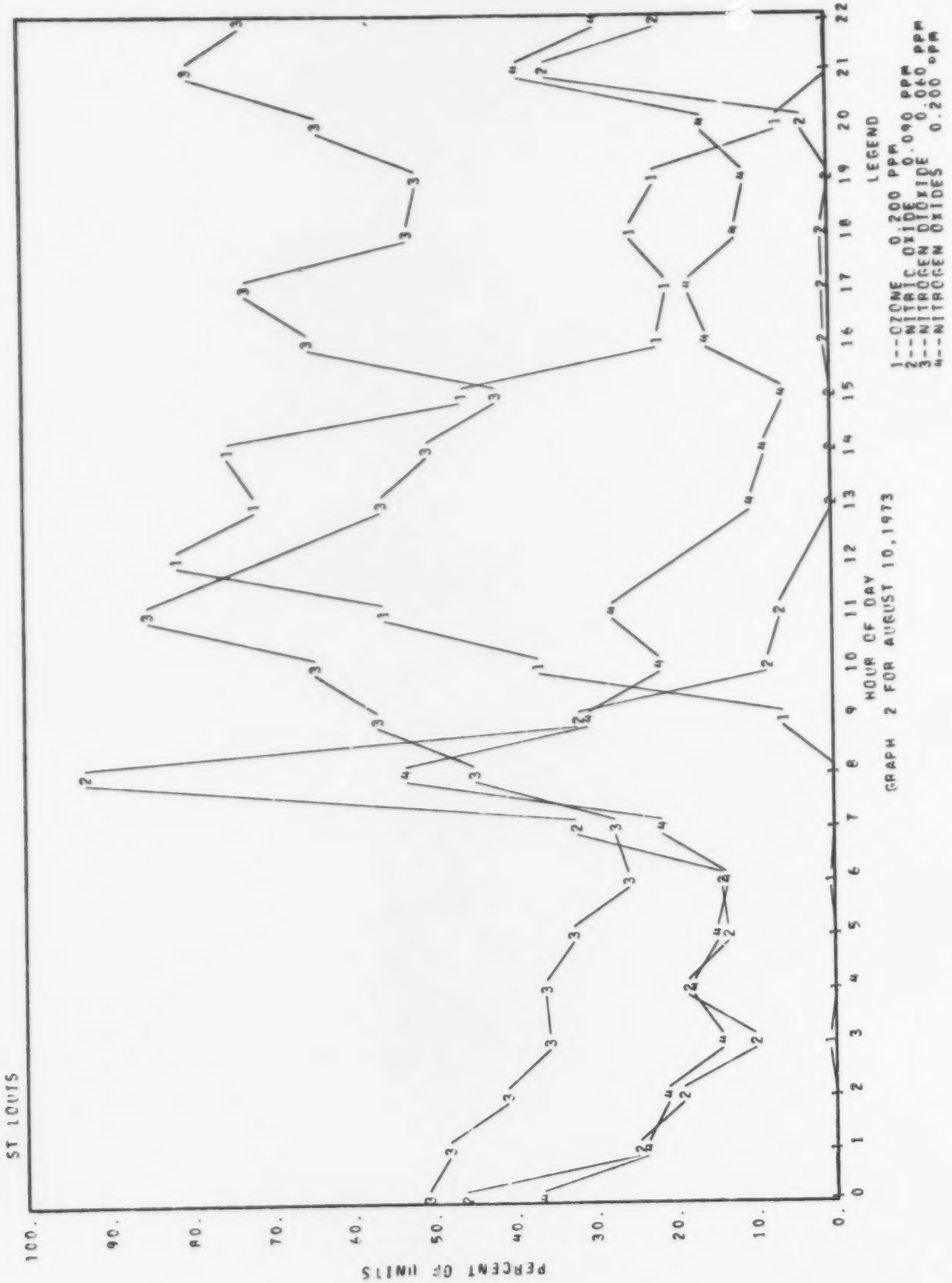
GRAPH 2 FOR AUGUST 9, 1973



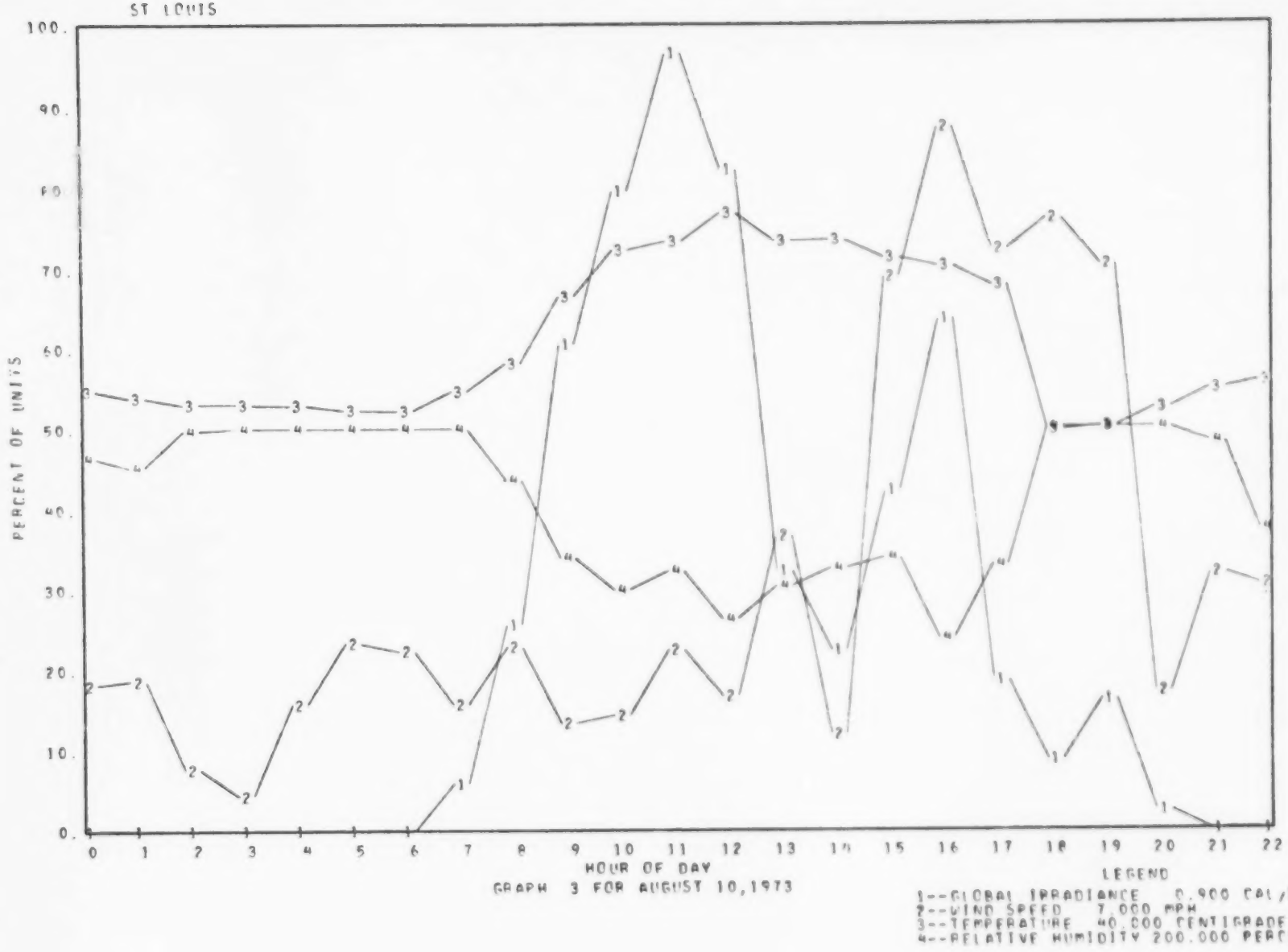
GRAPH 3 FOR AUGUST 9, 1973


ST LOUIS AUGUST 9, 1973
WIND DIRECTION IN DEGREES
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 10,1973
LEGEND
1--PAN 0.020 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.200 PPM
R--AMMONIA 0.005 PPM

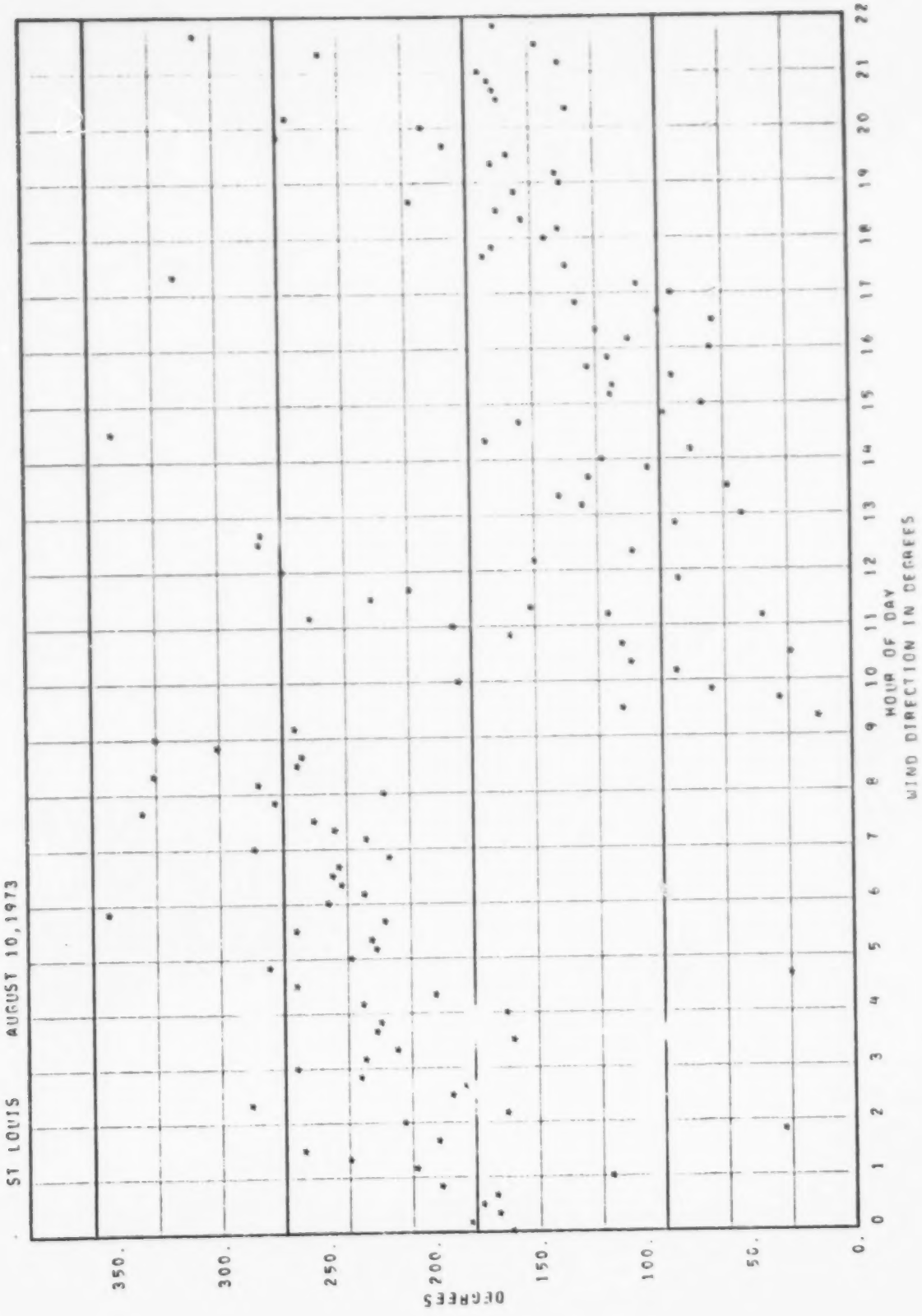


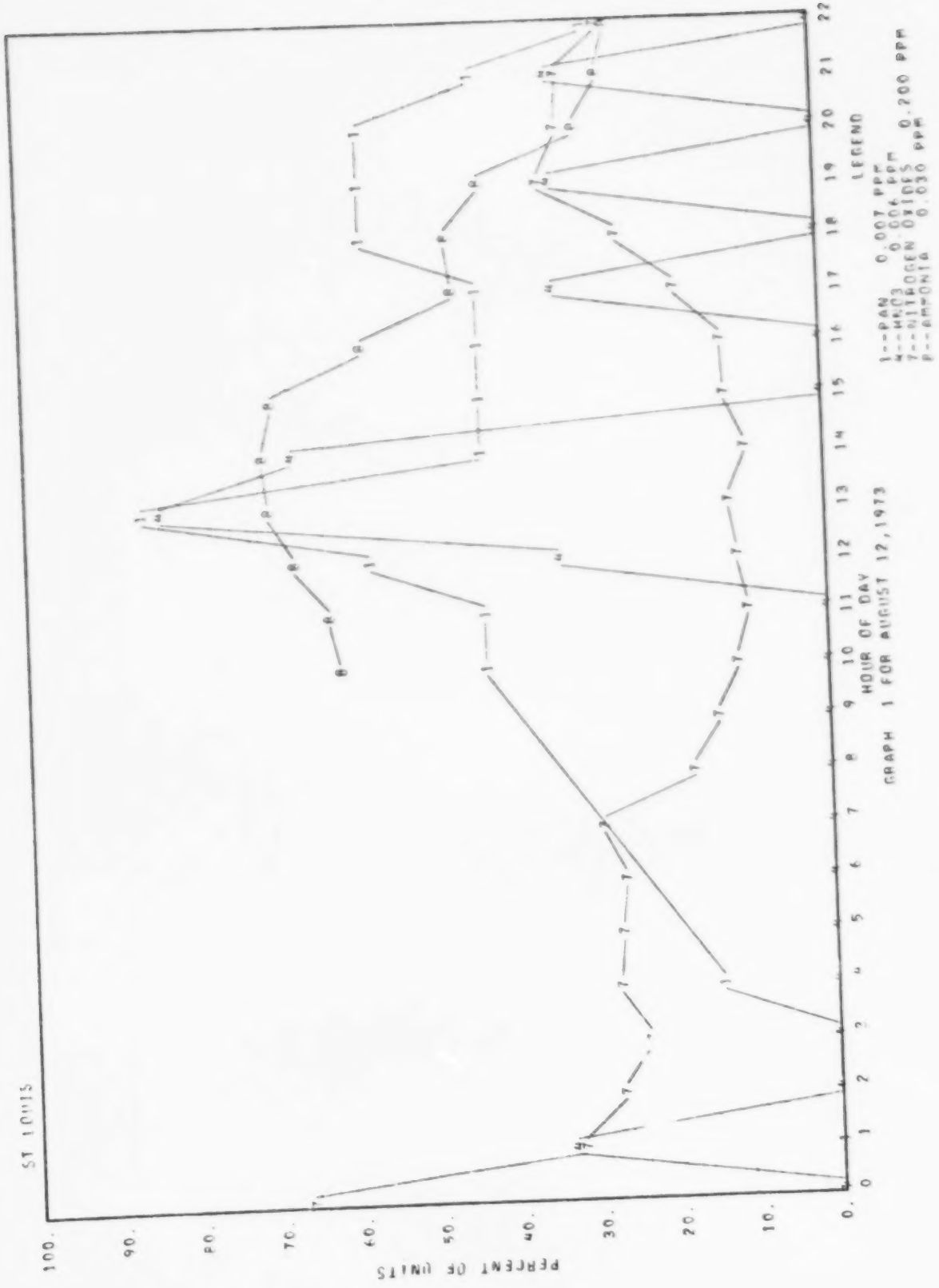
GRAPH 2 FOR AUGUST 10, 1973

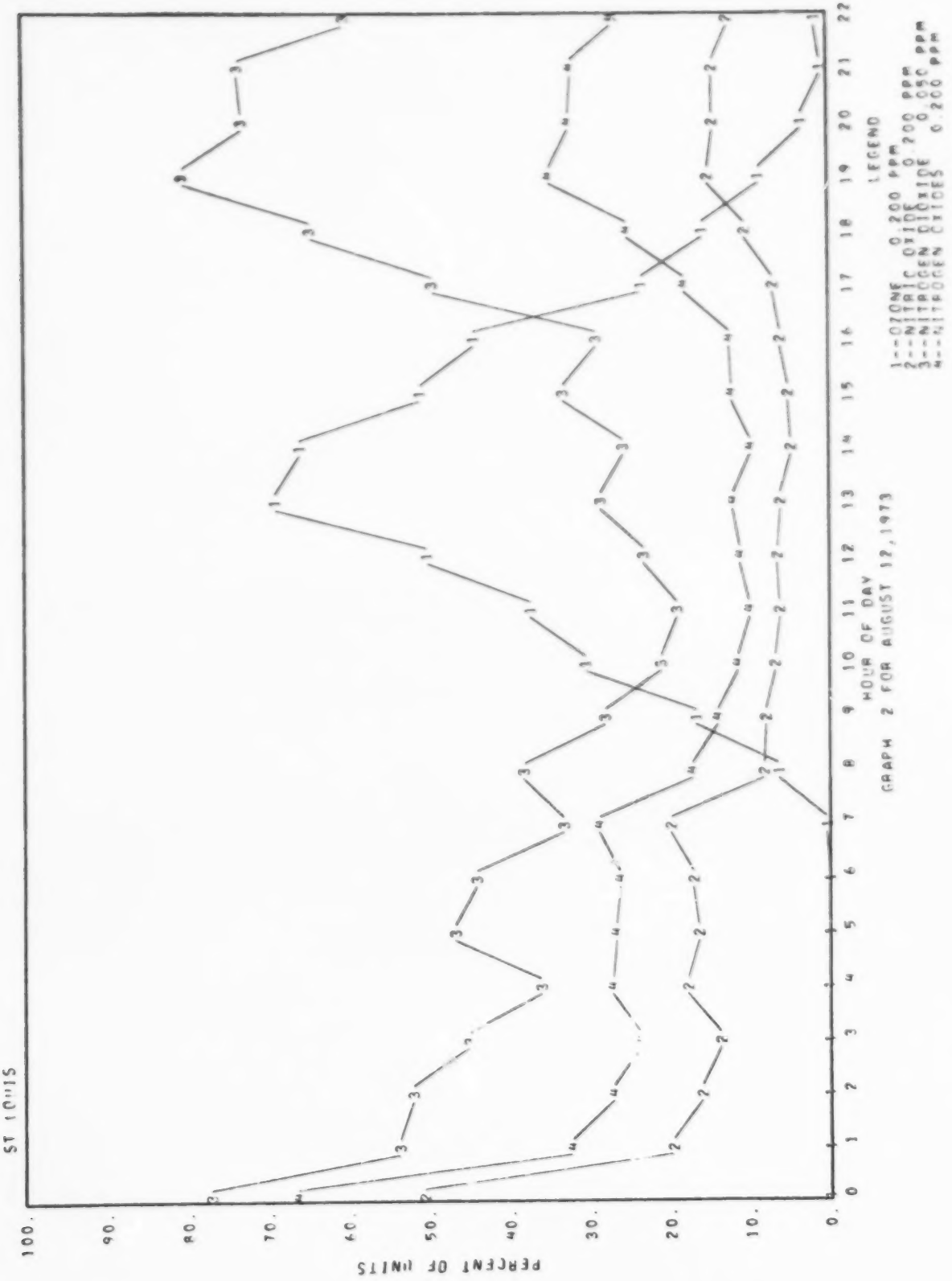


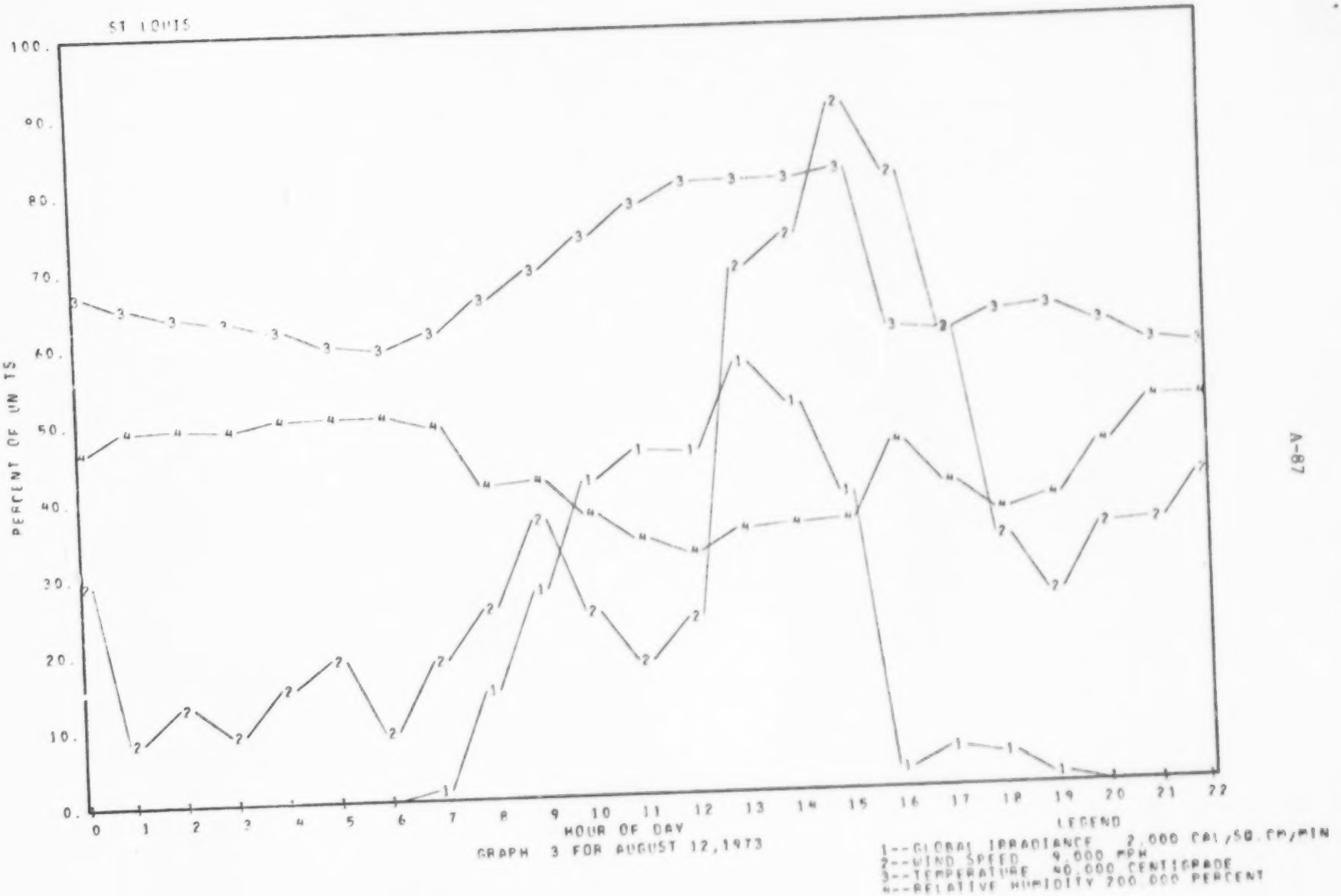
GRAPH 3 FOR AUGUST 10,1973

LEGEND
1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MIN
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 40.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

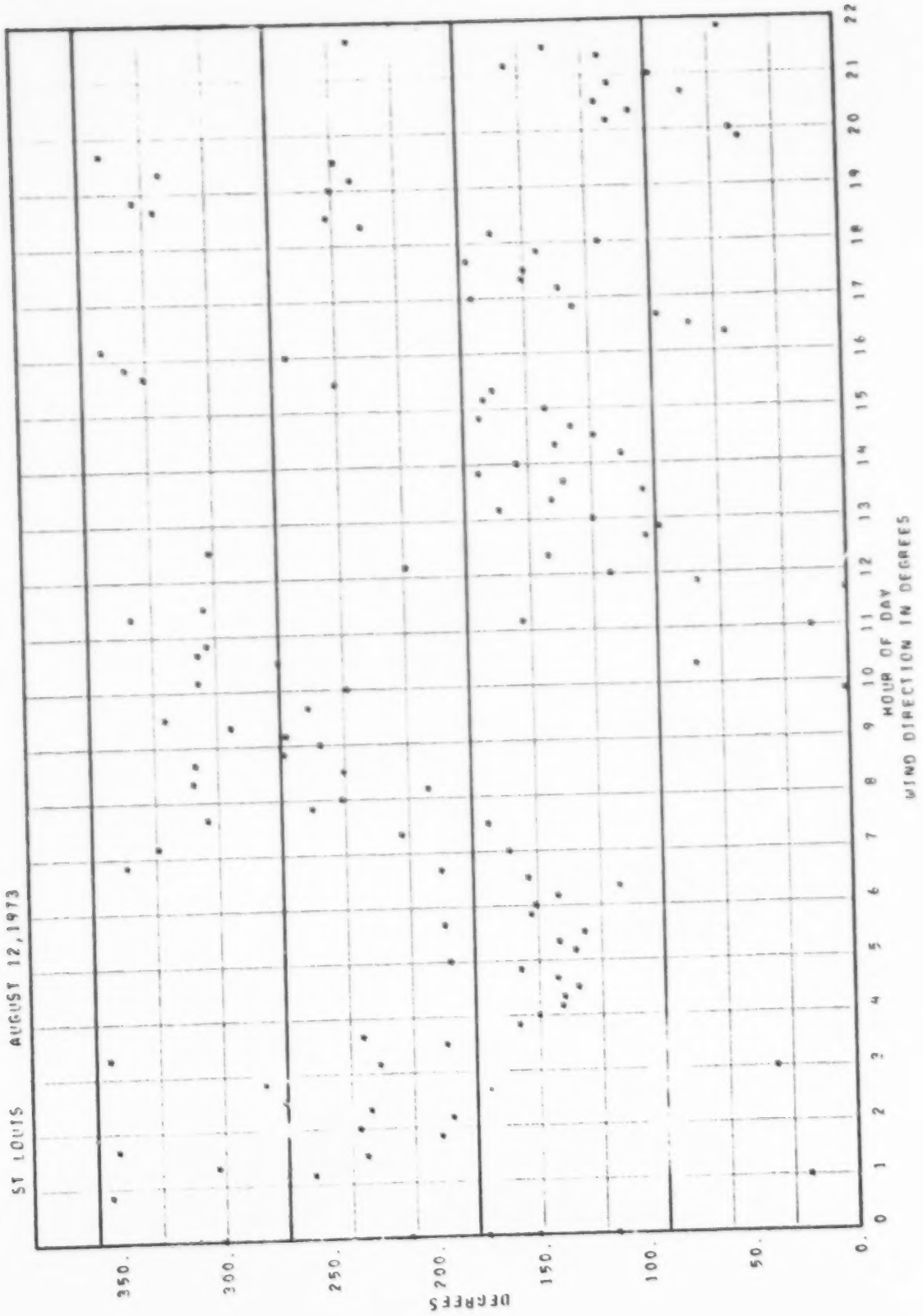

ST LOUIS AUGUST 10,1973
350.
300.
250.
200.
150.
100.
50.
0.
DEGREES
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

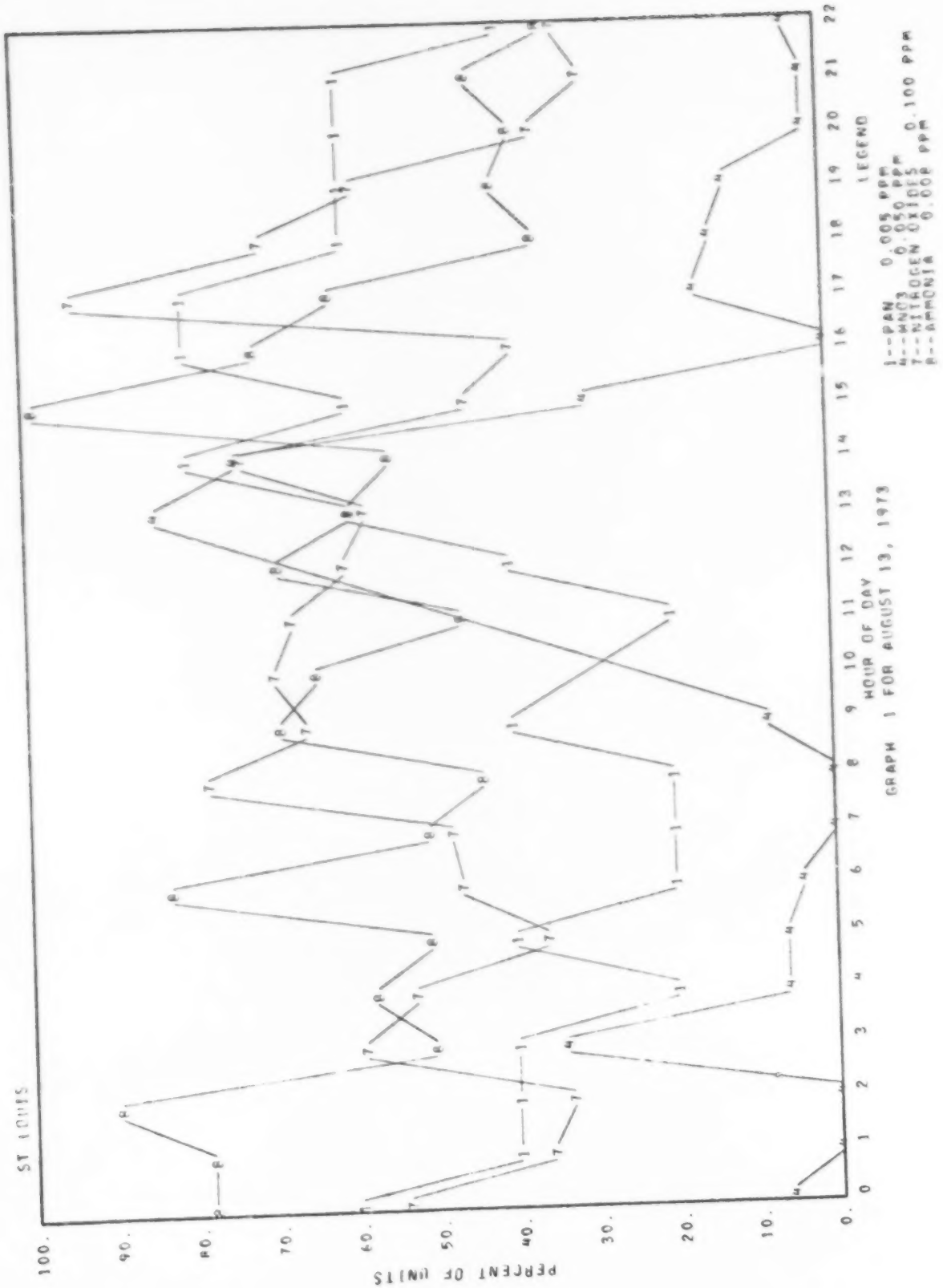

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 12, 1973
LEGEND
1--PAN 0.007 PPM
4--HNO3 0.004 PPM
7--NITROGEN OXIDES 0.200 PPM
P--AMMONIA 0.030 PPM

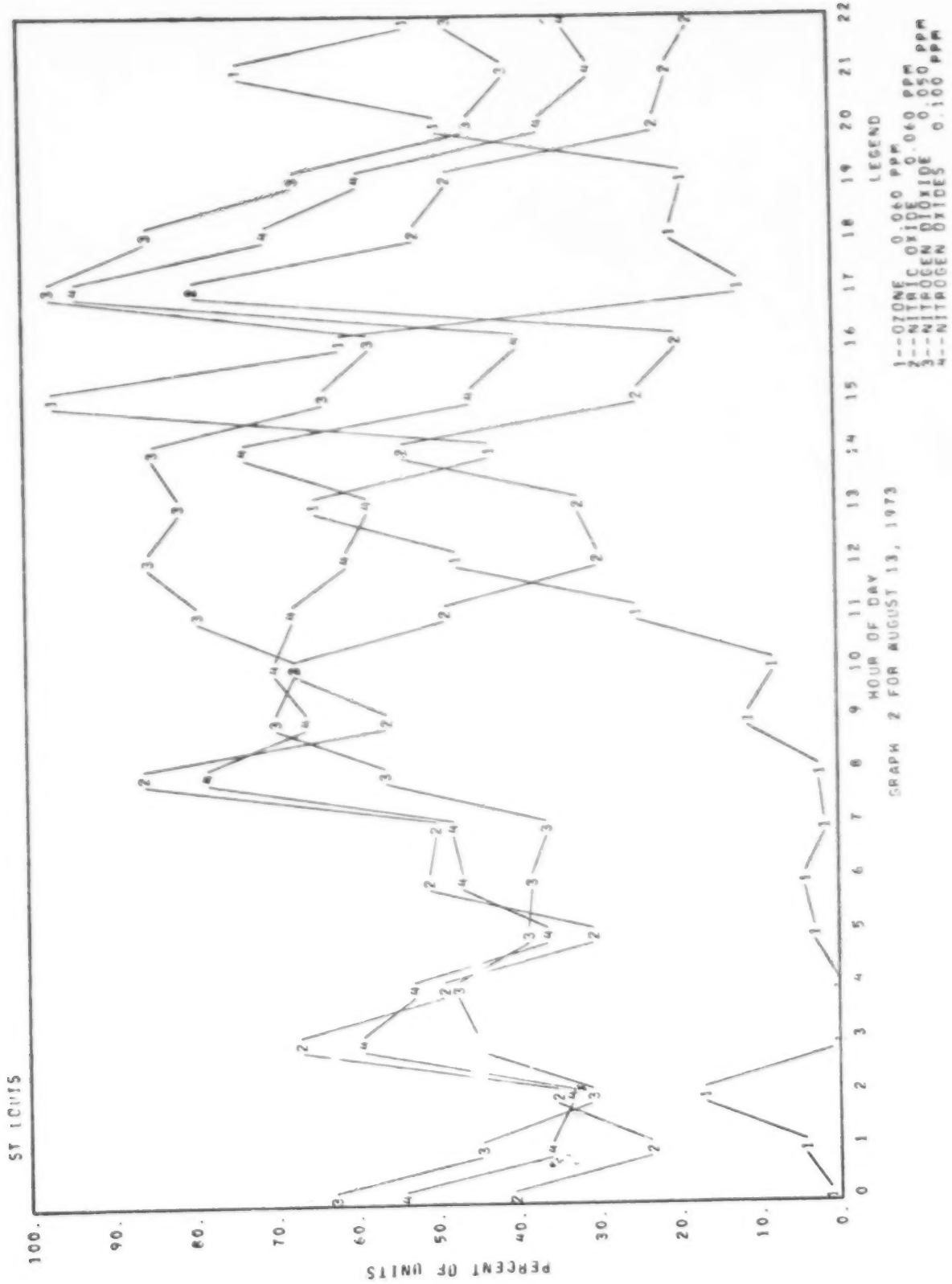

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 12, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.200 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.200 PPM



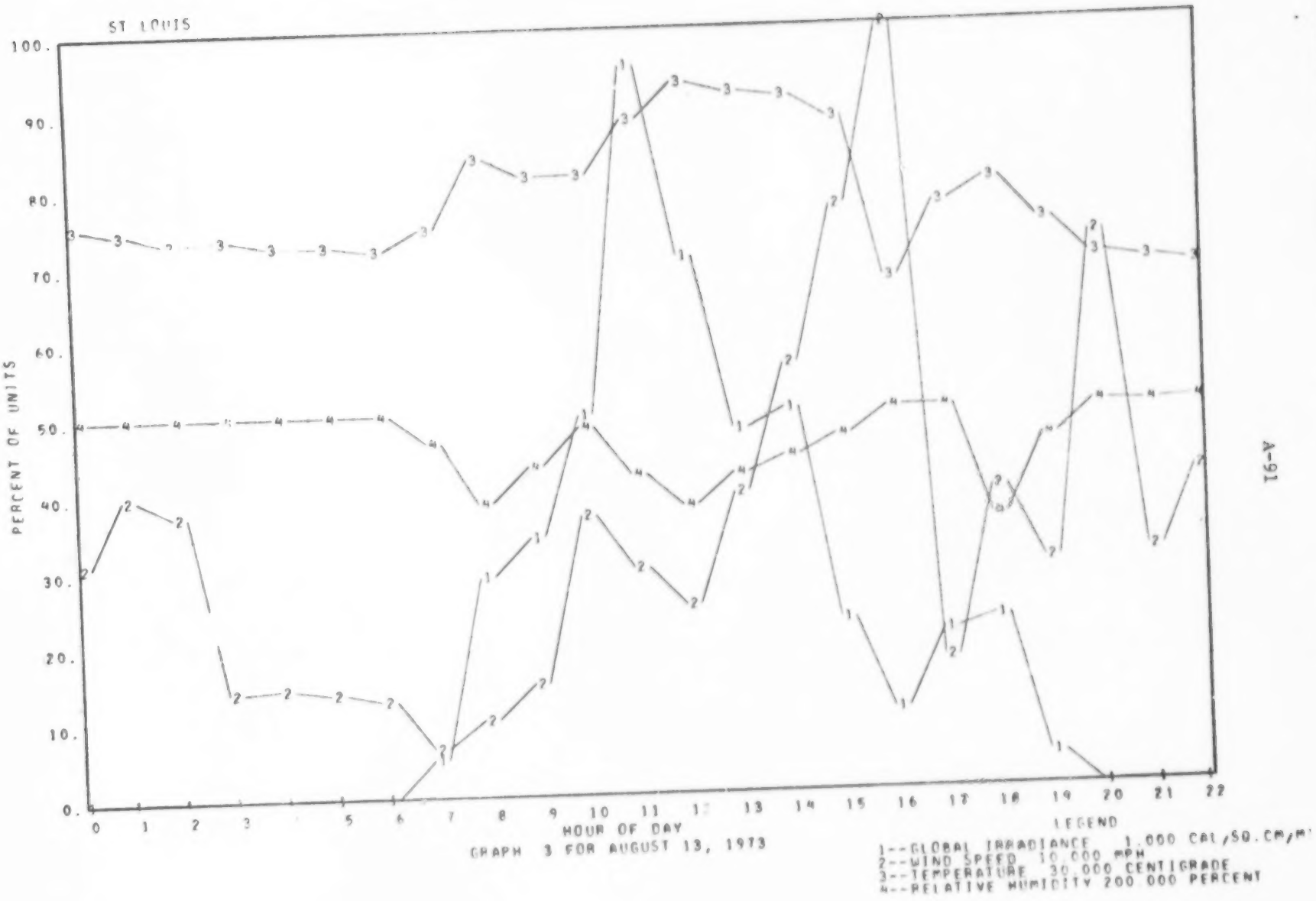
GRAPH 3 FOR AUGUST 12,1973

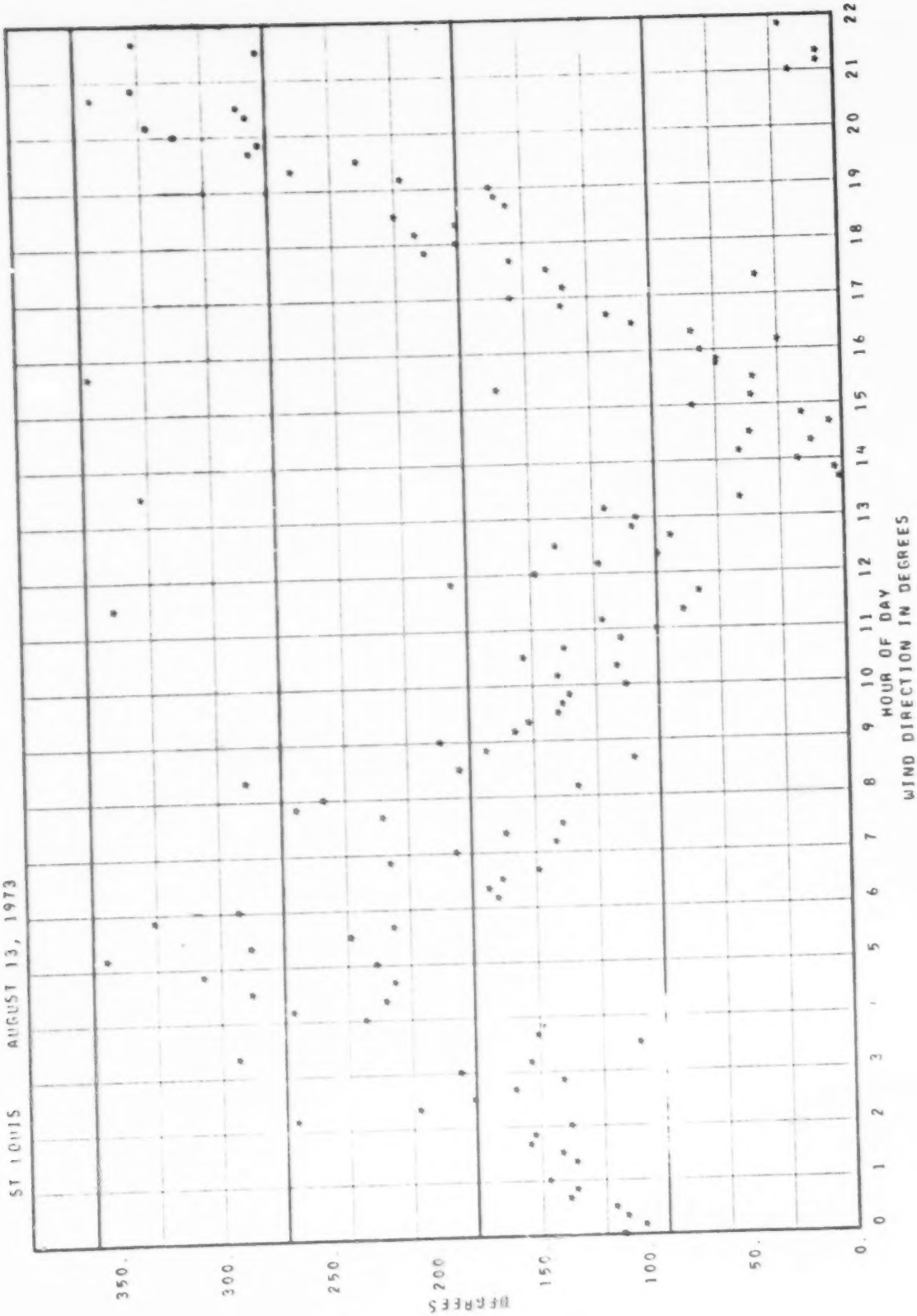

ST LOUIS AUGUST 12, 1973
WIND DIRECTION IN DEGREES
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

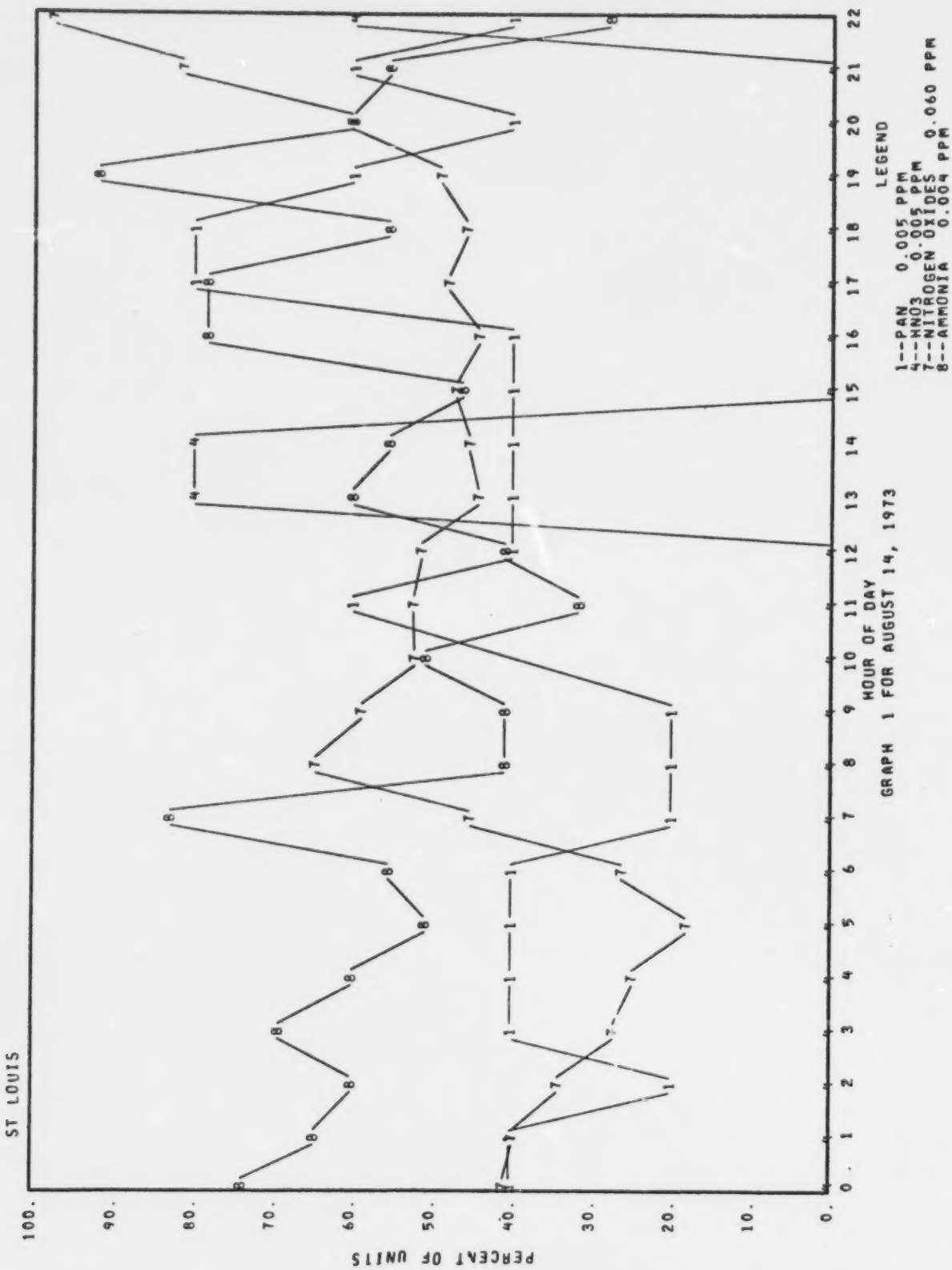

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 13, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.050 PPM
7--NITROGEN OXIDES 0.100 PPM
8--AMMONIA 0.002 PPM

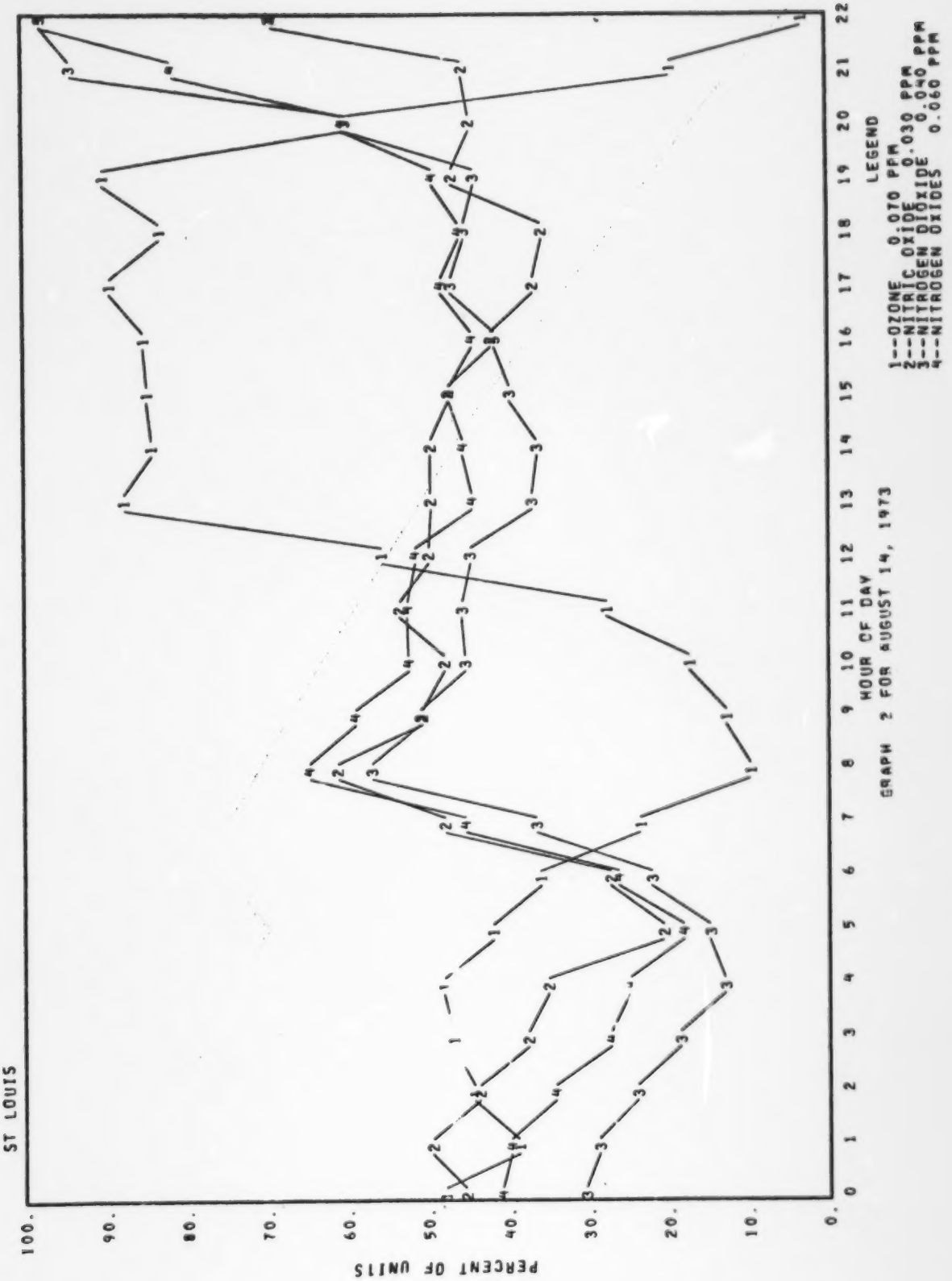


GRAPH 2 FOR AUGUST 13, 1973

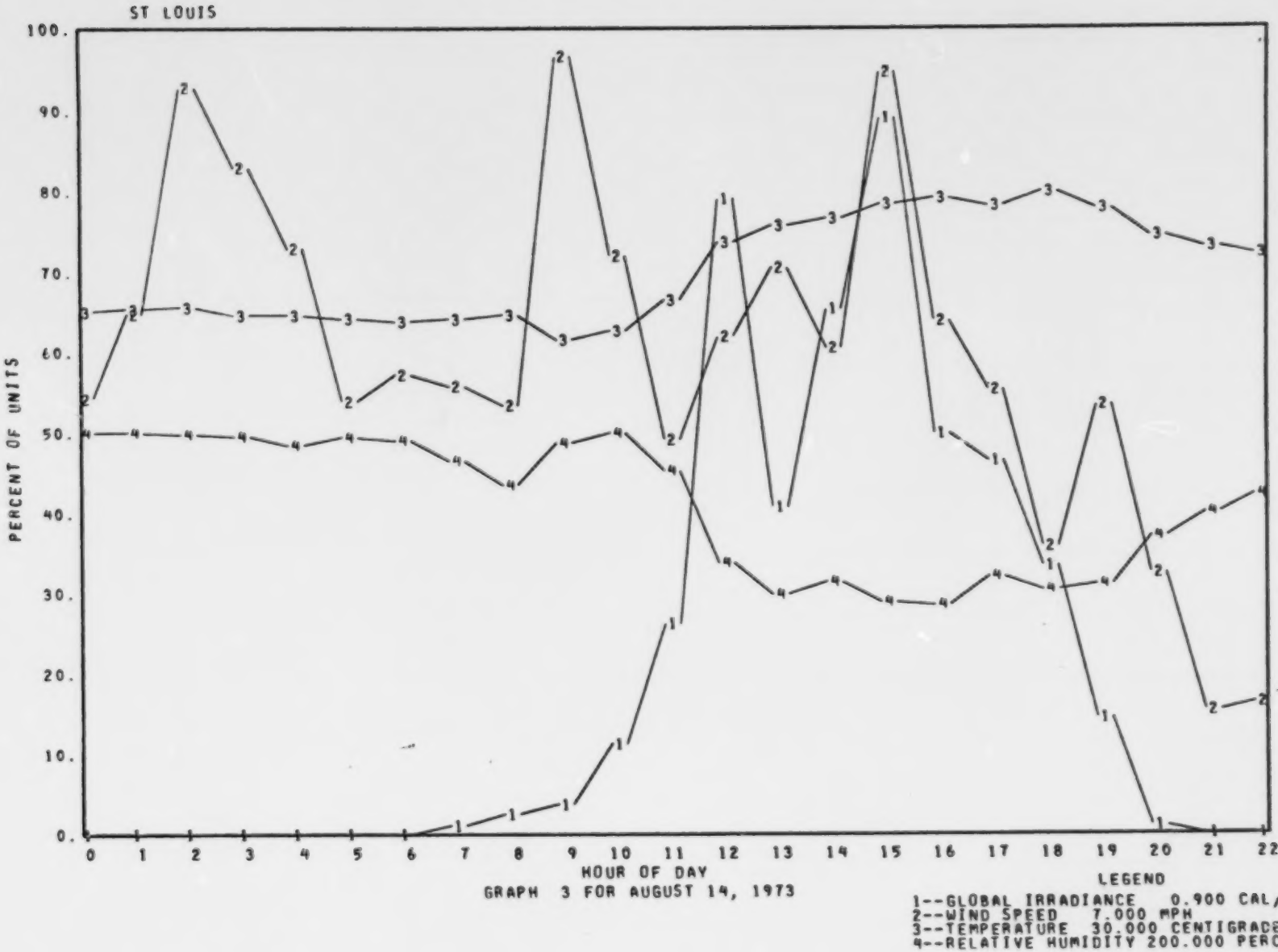

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 13, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/M
2--WIND SPEED 10.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

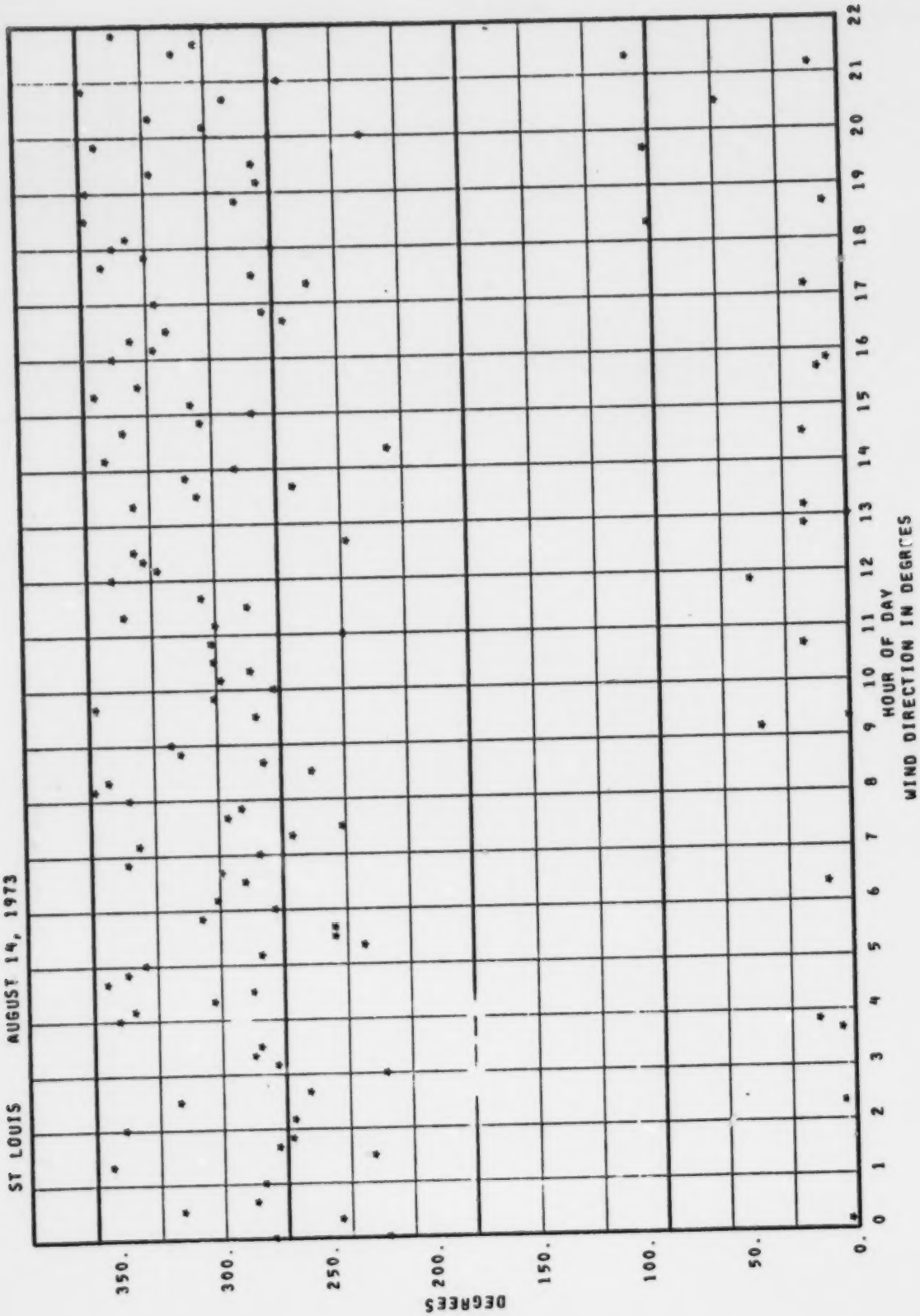

ST LOUIS AUGUST 13, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

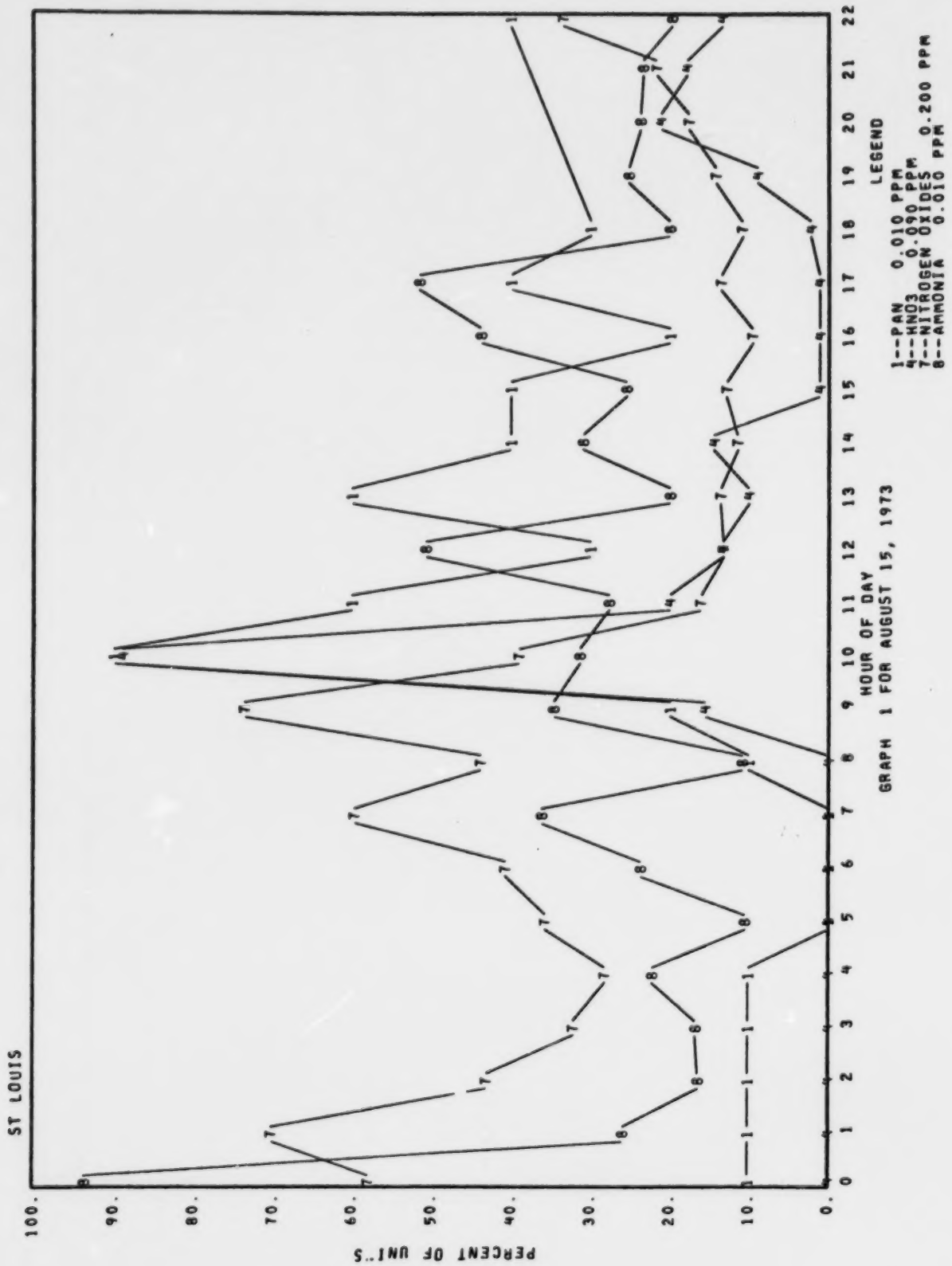

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 14, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.005 PPM
7--NITROGEN OXIDES 0.060 PPM
8--AMMONIA 0.004 PPM

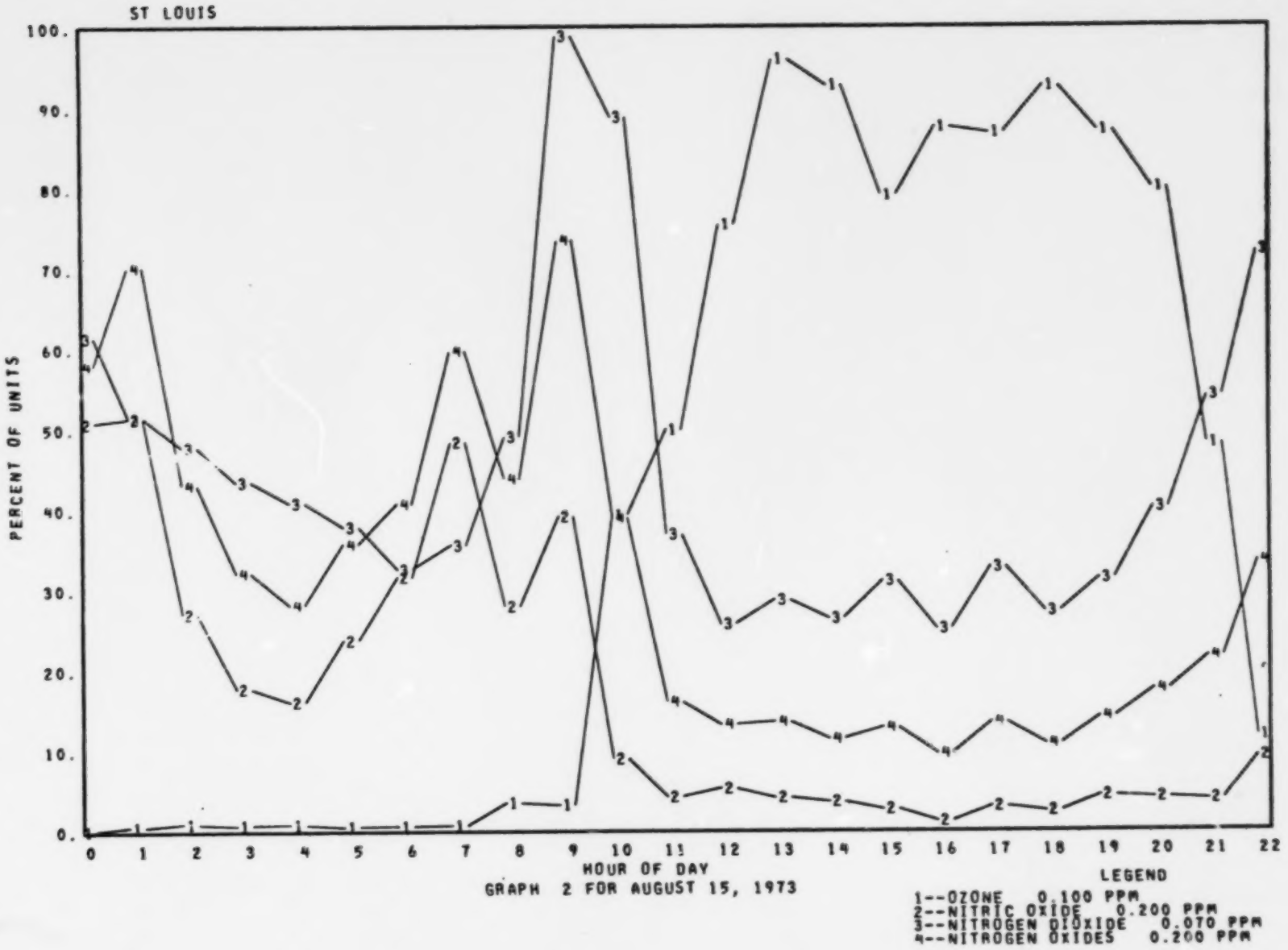


GRAPH 2 FOR AUGUST 14, 1973

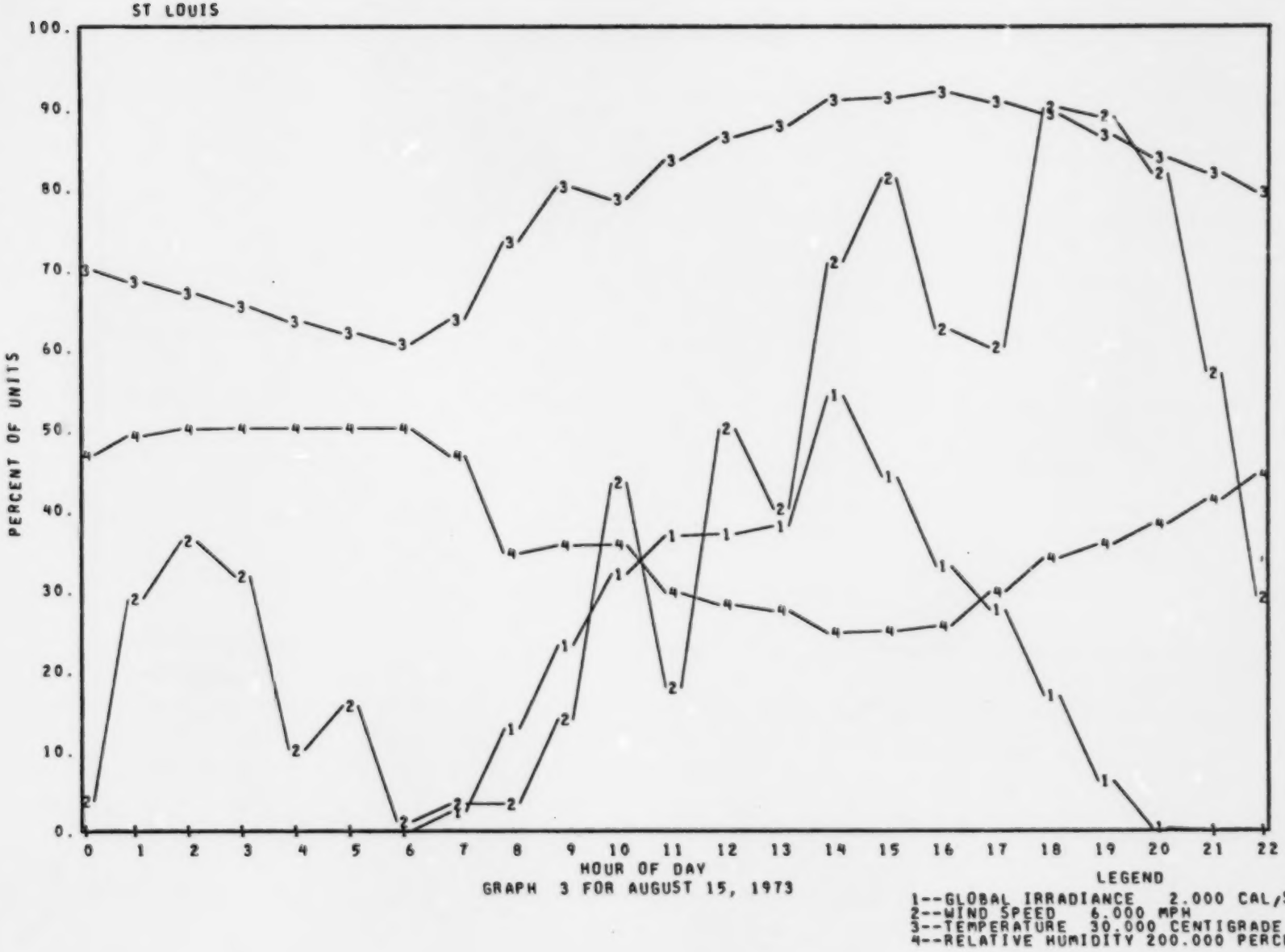

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 14, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MI
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT


ST LOUIS AUGUST 14, 1973
WIND DIRECTION IN DEGREES
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

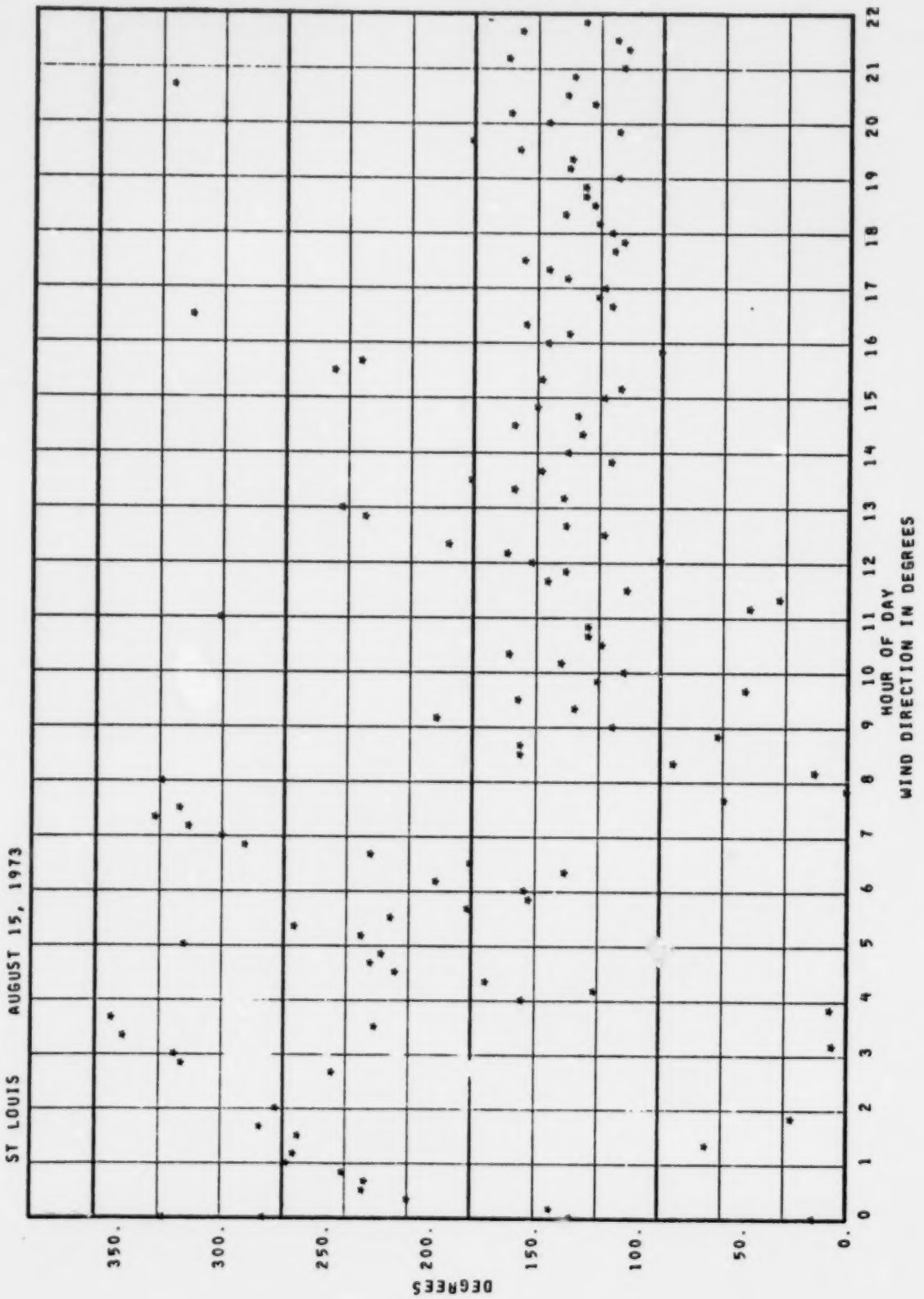

ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 15, 1973
LEGEND
1--PAN 0.010 PPM
4--HNO3 0.090 PPM
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.010 PPM

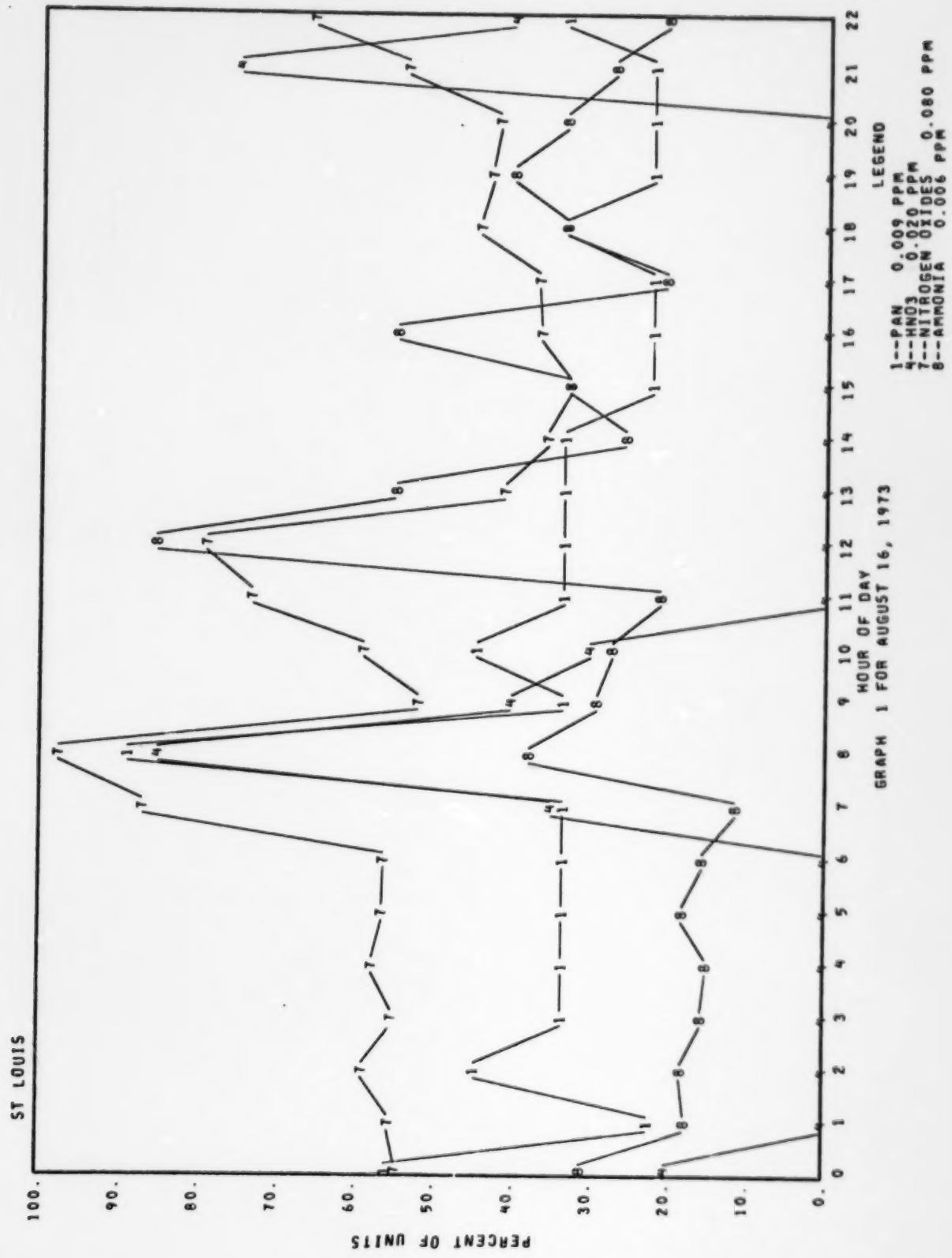


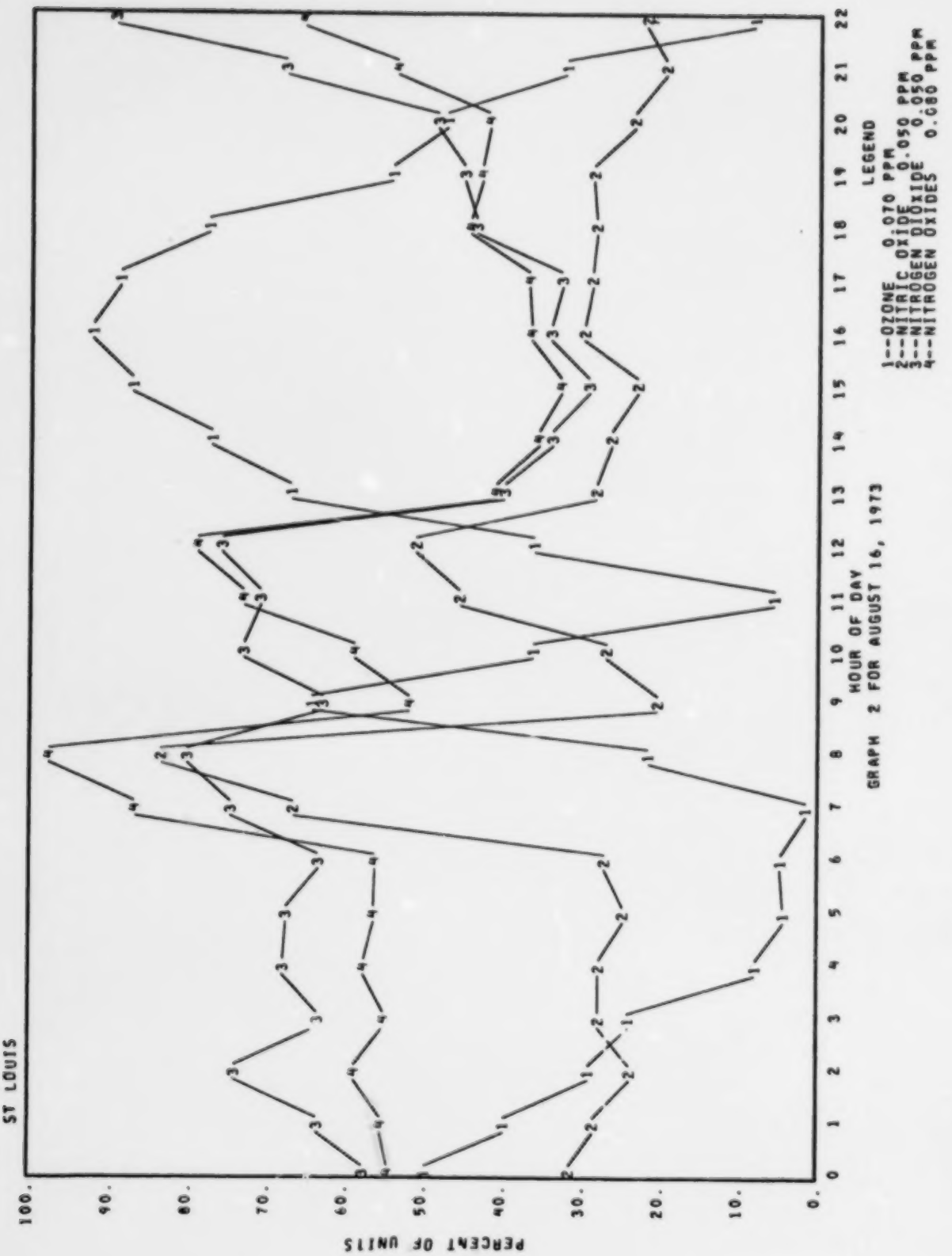
GRAPH 2 FOR AUGUST 15, 1973

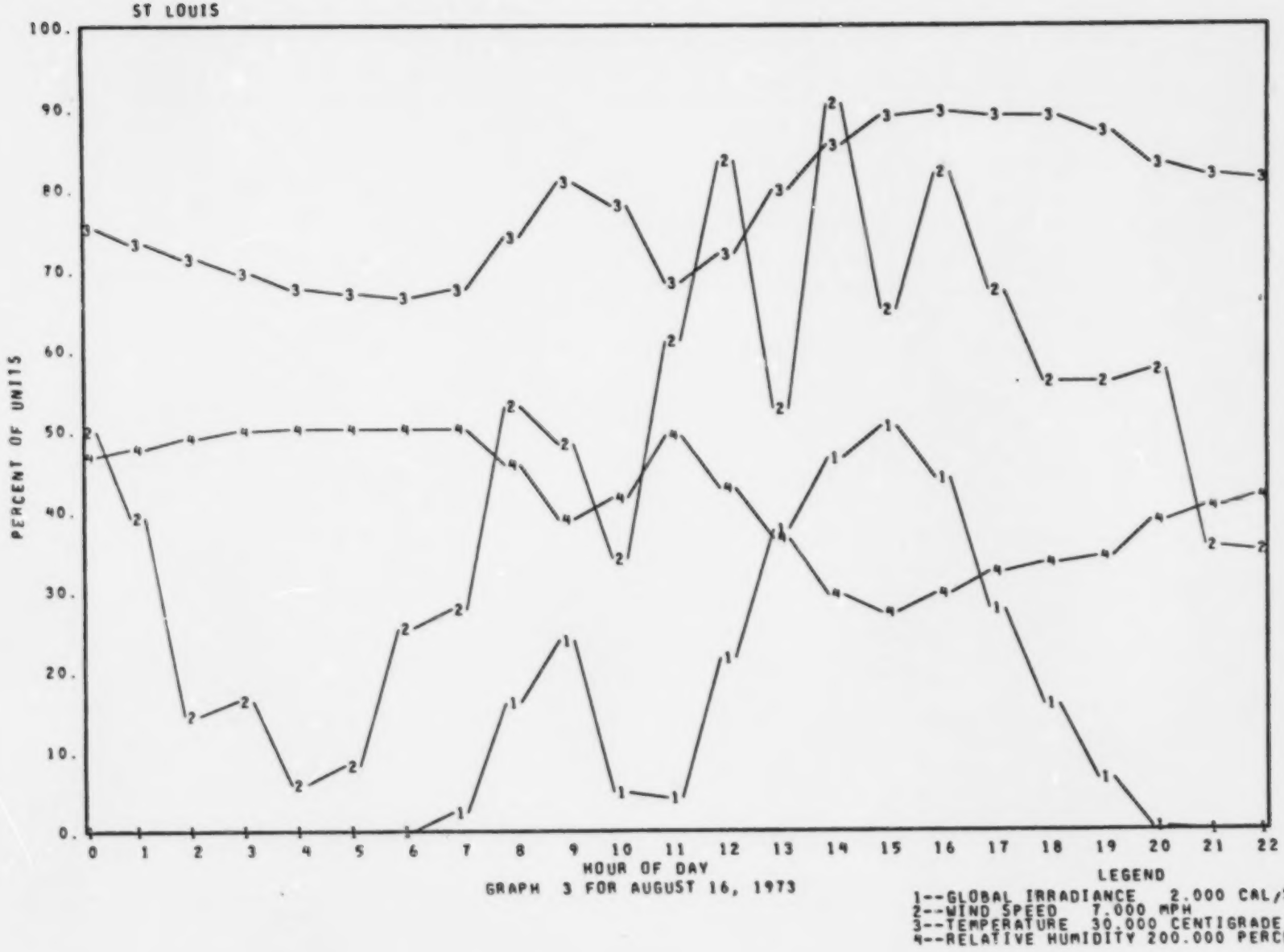


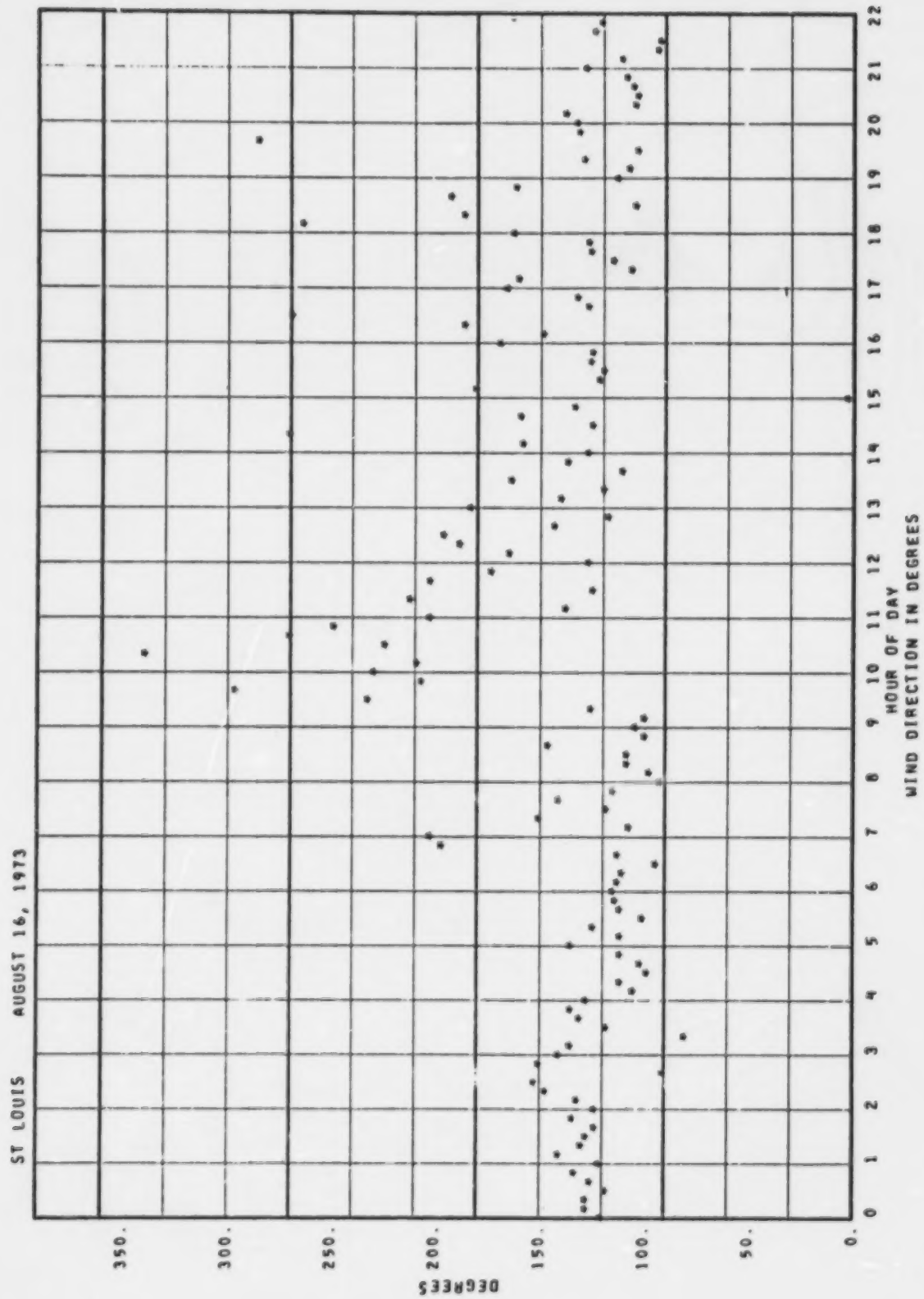
GRAPH 3 FOR AUGUST 15, 1973


ST LOUIS AUGUST 15, 1973
WIND DIRECTION IN DEGREES
DEGREES
HOUR OF DAY
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 16, 1973
LEGEND
1--PAN 0.009 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.080 PPM
8--AMMONIA 0.006 PPM


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 16, 1973
LEGEND
1--OZONE 0.070 PPM
2--NITRIC OXIDE 0.050 PPM
3--NITROGEN DIOXIDE 0.050 PPM
4--NITROGEN OXIDES 0.080 PPM


ST LOUIS
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 16, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT


ST LOUIS AUGUST 16, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

ST. LOUIS HYDROCARBON DATA

Hydrocarbon values in ppbC

Carbon Monoxide values in ppb

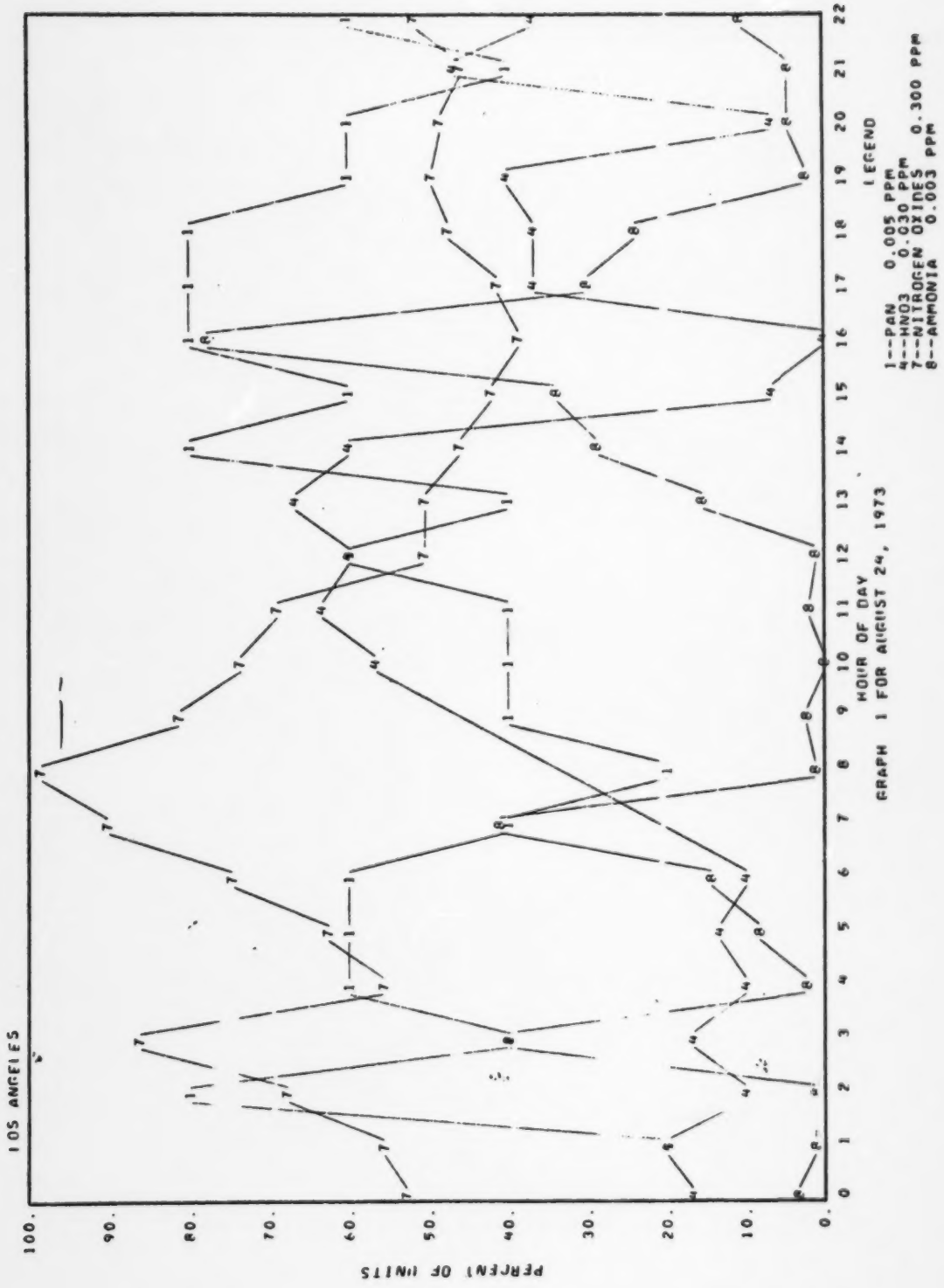
Compound	Date	July 18, 1973				July 19, 1973				July 20, 1973				July 23, 1973				July 24, 1973			
	Times	6-8	8-10	10-12	12-14	6-8	8-10	10-12	12-14	6-8	8-10	10-12	12-14	6-8	8-10	10-12	12-14	6-8	8-10	10-12	12-14
Methane		2420.0	2540.8	2390.4	2053.2	2507.2	2326.0	2271.2	2234.8	2309.6	2418.0	1984.2	1569.8	2245.8	2235.3	2093.8	2078.8	2107.2	2129.0	2285.4	2116.6
Ethane		21.7	17.4	14.1	6.6	26.5	16.9	23.1	15.8	17.9	17.6	15.8	15.7	14.8	12.3	8.2	11.6	19.8	18.9	17.5	15.9
Ethylene		28.8	28.7	17.2	6.8	30.5	28.1	39.7	26.0	23.7	29.9	15.2	11.4	20.1	18.0	8.4	9.0	20.0	26.0	17.4	14.4
Propane		47.1	20.9	41.3	8.4	21.2	14.3	17.2	15.1	16.7	18.8	16.8	19.2	28.5	16.2	15.8	10.6	30.2	15.3	14.7	12.2
Acetylene		20.8	23.6	18.4	4.8	17.0	26.5	38.5	27.0	26.9	22.6	12.4	10.5	12.4	13.7	4.4	4.3	15.4	20.8	13.3	11.6
Isobutane		34.6	21.5	38.8	5.9	6.7	12.1	19.7	16.4	15.5	11.9	11.8	11.7	21.1	12.3	11.4	7.5	19.3	13.3	10.9	9.2
N-Butane		77.9	61.7	63.3	18.2	24.1	44.0	57.9	52.5	35.4	47.9	36.8	32.0	37.2	36.9	30.8	21.2	39.4	39.5	34.2	26.6
Propylene		10.2	8.9	4.6	2.7	5.3	8.7	11.7	4.0	3.9	6.9	4.0	0.4	5.1	3.0	2.4	2.7	4.1	5.1	3.7	3.1
Propadiene		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neopentane		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isopentane		80.9	77.6	76.3	28.9	38.5	68.8	87.4	67.5	47.1	73.4	45.8	35.2	45.5	42.8	37.3	33.3	51.7	52.5	43.9	31.9
1-Butene + Iso-Butylene		8.9	13.6	11.2	3.7	9.9	8.2	12.3	8.2	8.9	13.3	9.8	4.9	11.7	5.1	5.5	4.3	7.0	11.4	13.3	5.7
Trans-Butene-2 + Methylacetylene		4.9	3.4	0.9	2.3	3.8	6.1	4.3	3.6	3.2	1.9	2.4	1.7	4.1	3.3	2.1	3.1	3.8	3.6	6.5	1.5
Cis-Butene-2		3.0	1.5	0.4	0.9	2.0	2.7	3.1	1.5	2.2	1.4	1.4	1.4	2.0	1.7	1.0	1.4	1.7	3.1	2.7	0.7
Butadiene-1,3		2.4	2.2	0.3	0.5	2.0	3.8	3.1	3.1	2.0	2.7	1.3	0.9	2.1	2.1	0.7	0.9	1.4	2.6	3.1	0.6
N-Pentane		32.6	34.0	28.2	8.7	16.0	30.4	34.0	27.3	18.9	30.0	19.4	15.1	17.2	16.6	14.8	7.5	15.7	22.7	17.9	14.4
Pentene-1		2.5	2.1	1.4	2.0	6.7	2.8	1.7	2.0	1.8	1.9	3.6	1.7	4.1	1.8	3.6	2.0	1.5	3.9	1.3	1.8
2-Methylbutene-1		5.6	9.0	4.9	5.1	3.9	8.1	4.0	4.7	7.6	7.0	4.5	4.3	5.2	5.2	1.9	2.8	3.7	5.0	1.7	2.2
Trans-Pentene-2		4.6	6.2	3.3	3.4	4.5	7.7	6.4	4.0	7.0	9.4	4.3	2.6	2.0	2.1	2.1	2.3	4.4	6.5	2.6	3.4
Cis-Pentene-2		3.6	6.1	3.0	3.6	3.6	3.0	6.8	7.2	4.5	7.1	5.4	2.6	7.5	5.4	2.6	3.6	7.9	2.0	5.1	3.4
2-Methylbutene-2		4.9	4.1	4.3	2.8	3.9	5.8	6.8	5.6	5.5	6.5	4.7	2.4	9.5	4.6	3.0	3.3	7.0	2.4	5.1	3.8
Cyclopentane + 2-Methylpentane		32.0	24.0	35.5	12.5	21.0	40.5	44.8	30.7	32.4	43.0	26.9	13.1	15.4	19.6	16.2	8.7	16.2	22.9	20.1	16.4
3-Methylpentane		13.1	15.4	17.5	4.8	9.9	14.9	18.9	16.0	7.9	22.1	17.6	9.8	6.6	5.9	4.0	2.6	6.7	11.7	5.9	5.6
4-Methylpentene-2		0.0	18.7	0.5	0.4	0.4	6.1	1.0	1.0	2.1	0.0	2.0	2.0	2.0	1.0	0.0	0.5	3.0	2.0	0.0	0.0
Hexane		14.2	1.2	15.9	5.5	11.1	21.7	23.5	16.1	11.5	32.1	11.0	7.1	7.9	1.7	4.6	2.4	9.6	12.5	9.0	7.9
Hexene-1		0.5	2.6	1.5	0.0	0.5	1.0	2.4	2.0	2.6	11.7	1.0	2.7	0.0	0.0	1.4	0.4	0.5	0.3	0.0	0.0
2,2-Dimethylpentane		0.8	4.3	2.7	0.0	0.5	3.4	4.2	2.0	2.6	3.0	1.0	1.5	0.0	0.0	1.6	0.4	0.7	0.4	0.0	0.0
2,4-Dimethylpentane		6.6	11.3	6.8	3.3	6.5	7.2	10.5	11.6	6.8	8.2	7.5	4.1	3.7	6.4	3.6	2.7	3.8	4.4	3.7	2.7

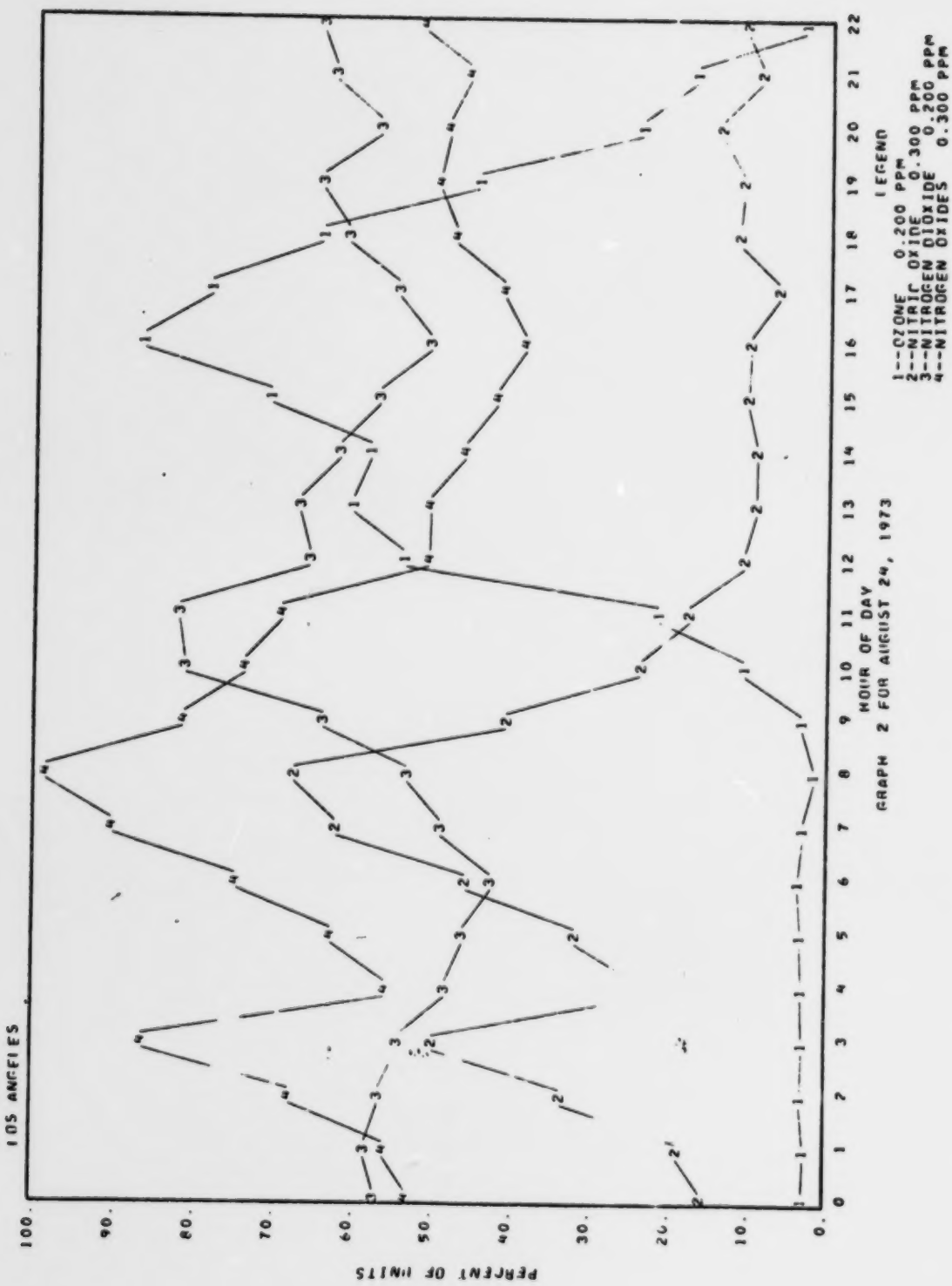
St. Louis Hydrocarbon Data (continued)

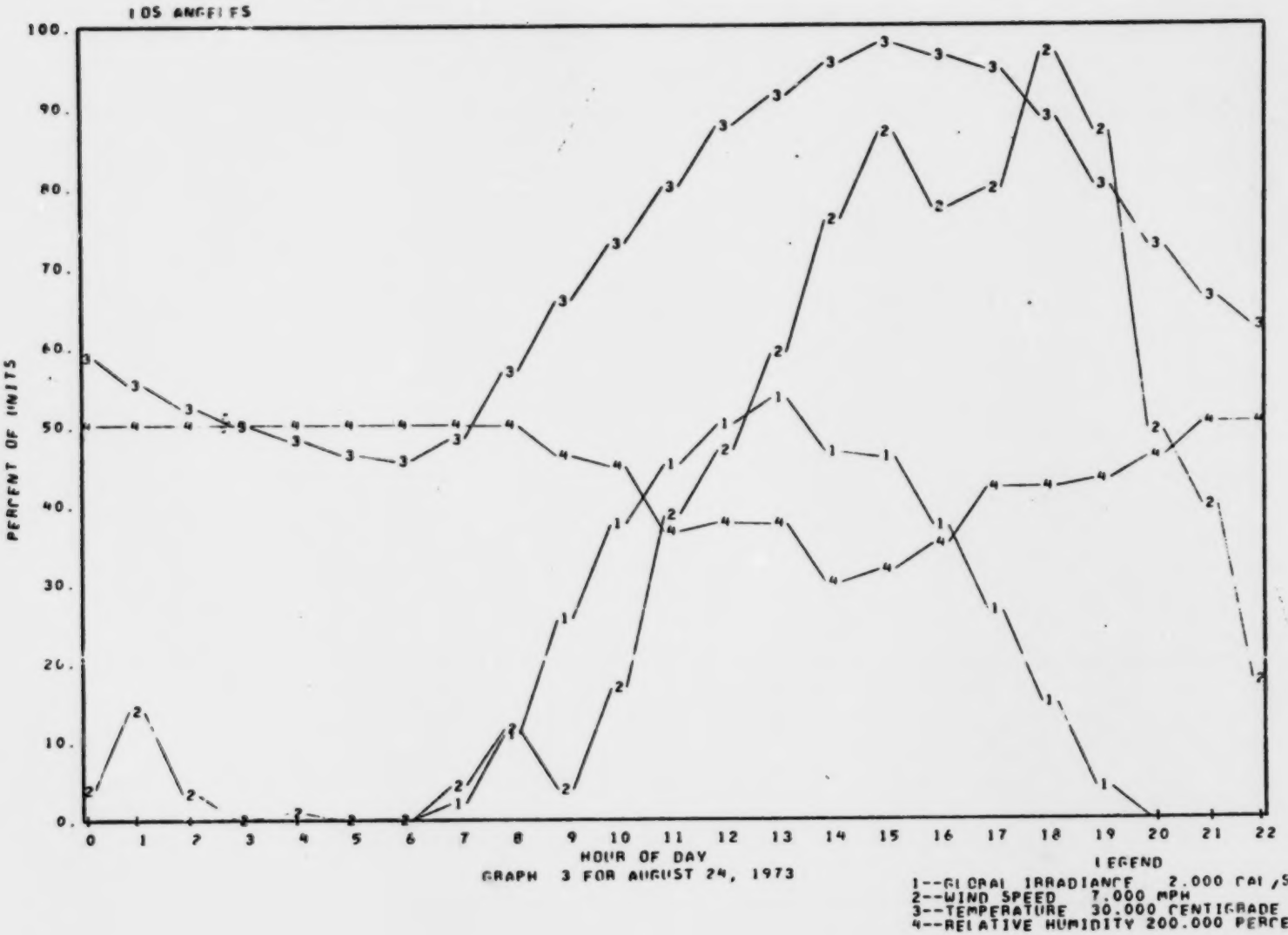
Compound	Date / Times	July 18, 1973 6-8	8-10	10-12	12-14	July 19, 1973 6-8	8-10	10-12	12-14	July 20, 1973 6-8	8-10	10-12	12-14	July 23, 1973 6-8	8-10	10-12	12-14	July 24, 1973 6-8	8-10	10-12	12-14
2-Methylpentene		13.6	11.3	7.1	5.4	10.2	15.3	20.4	16.0	9.5	25.0	18.7	4.6	4.3	10.0	4.4	3.1	5.0	5.9	5.2	4.2
Cis-2-Hexene		0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3,3-Dimethylpentane		0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclohexane		16.1	10.2	7.7	0.0	6.8	6.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-Methylhexane		17.3	6.8	10.2	0.0	7.7	10.2	8.3	5.6	9.4	16.5	6.8	5.6	3.6	7.8	2.4	22.6	6.0	5.7	14.2	4.4
2,3-Dimethylpentane		15.4	17.6	8.8	0.0	9.4	11.1	17.8	16.3	7.4	12.5	6.8	10.7	5.0	8.8	6.0	4.6	5.9	10.7	8.6	3.4
3-Methylhexane		0.0	0.0	0.0	0.0	0.0	0.0	17.9	14.3	6.4	18.9	14.3	8.8	5.5	6.8	12.2	4.1	6.0	14.4	9.1	6.2
1,Cis-3-Dimethyl-cyclopentane		16.0	16.7	13.3	0.0	15.3	14.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2,2,4-Trimethylpentane		11.2	10.6	9.5	0.0	0.0	13.2	24.5	14.3	8.5	15.0	17.3	7.1	9.1	13.9	7.5	7.1	6.4	17.3	12.6	7.0
N-Heptane		17.9	0.0	0.0	0.0	0.0	0.0	15.0	13.1	8.7	11.3	7.5	12.8	3.2	7.9	3.4	0.0	4.4	12.2		15.3
Methylcyclohexane								8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Toluene										37.8	106.2	32.5	39.9	55.3	104.8	51.7	39.5	36.0	28.9	23.2	11.2
Nonane										3.1	10.0	3.4	2.0	3.2	6.3	2.4	4.2	2.0	4.6	1.8	1.6
Ethylbenzene										7.3	13.6	11.1	9.0	8.2	28.0	22.1	14.6	7.5	19.5	10.4	2.6
P-Xylene										6.9	14.3	8.2	8.4	5.7	26.9	18.5	11.6	7.6	14.9	5.8	1.6
M-Xylene										21.2	47.1	20.3	19.9	15.2	73.5	41.6	39.6	17.8	25.4	11.1	0.3
O-Xylene										8.0	17.0	7.7	8.0	13.1	38.7	19.0	23.8	8.3	16.6	7.9	5.7
Isopropylbenzene + Styrene										5.1	6.6	10.3	2.7	4.6	10.2	6.1	8.5	10.7	12.0	0.9	4.4
N-Decane										3.3	5.2	6.9	1.2	1.1	4.6	2.6	2.5	0.9	1.6	3.4	1.0
N-Propylbenzene										1.6	2.4	7.4	1.2	0.9	5.1	3.2	1.8	2.2	1.7	1.0	2.0
M+P-Ethyltoluene										8.2	32.7	14.5	2.6	7.6	15.8	13.8	11.8	17.6	23.6	4.3	5.0
1,3,5-Trimethylbenzene										7.5	6.5	5.3	1.3	5.7	9.5	5.0	3.5	6.2	10.1	2.1	1.2
Tert-Butylbenzene + O-Ethyltoluene										6.2	4.7	4.2	0.5	1.1	9.1	5.4	2.9	13.2	17.8	1.6	1.2
Sec-Butylbenzene + 1,2,4-Trimethylbenzene										9.4	14.9	15.0	4.5	11.3	21.1	16.0	47.4	10.4	14.0	4.1	4.0
Unknown										5.8	3.3	5.2	3.1	0.3	1.5	9.7	6.6	5.0	8.6	3.8	2.0
1,2,3-Trimethylbenzene										2.6	0.1	0.1	0.1	0.3	1.2	3.4	2.0	4.4	3.7	0.7	3.3
N-Butylbenzene + P-Diethyl-benzene										12.4	4.0	4.0	8.1		8.0	4.0	3.2	8.2	1.1	1.8	1.0
Non-Methane HC (FIA)																					
Methane (FIA)																					
Carbon Monoxide	1674.4	2808.0	1266.0	578.4	1485.2	1747.5	2134.4	1636.4	1536.0	2047.0	593.5	389.8	882.0	1017.6	817.8	527.6	1809.6	1423.8	1113.9	930.3	

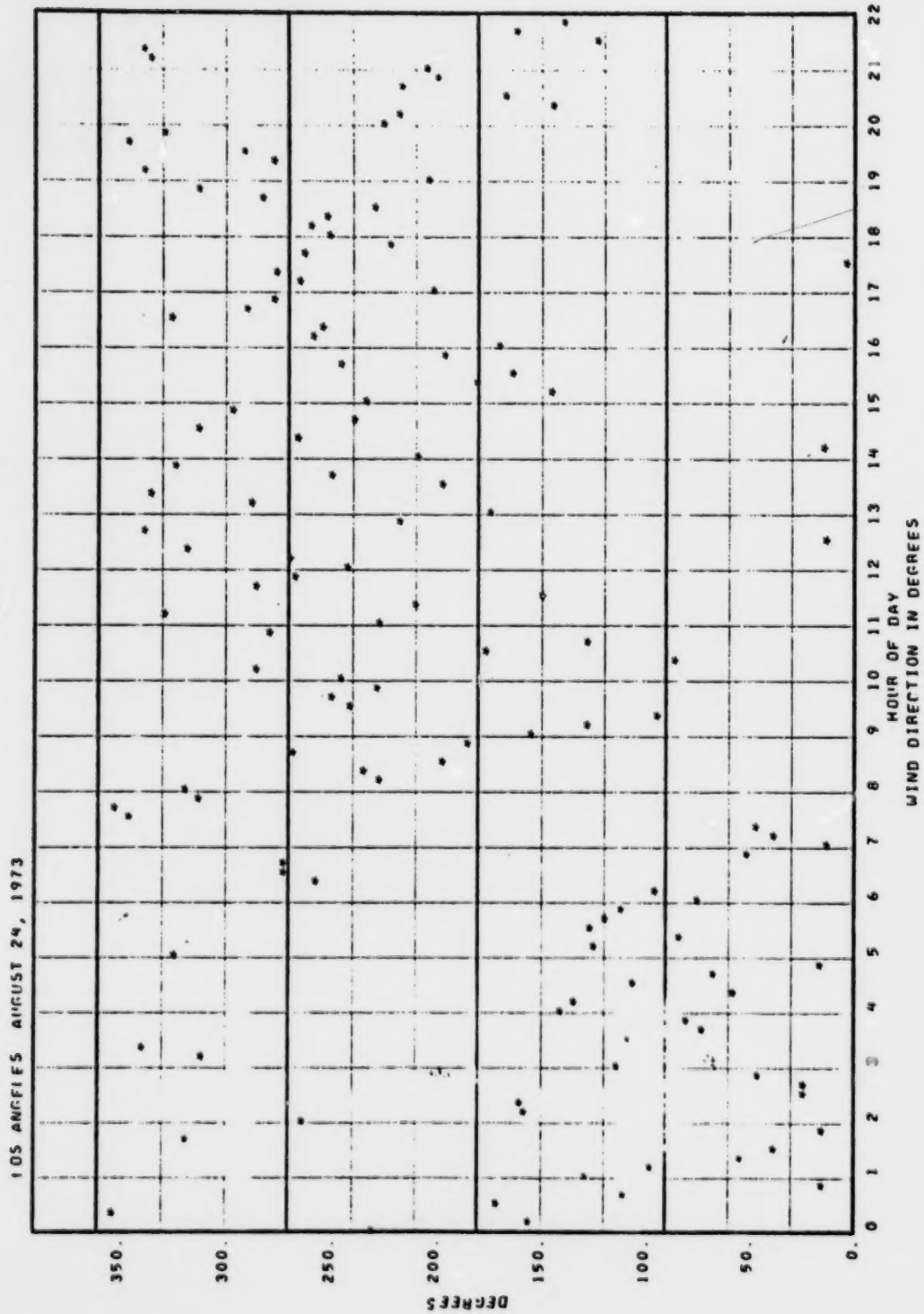
APPENDIX B

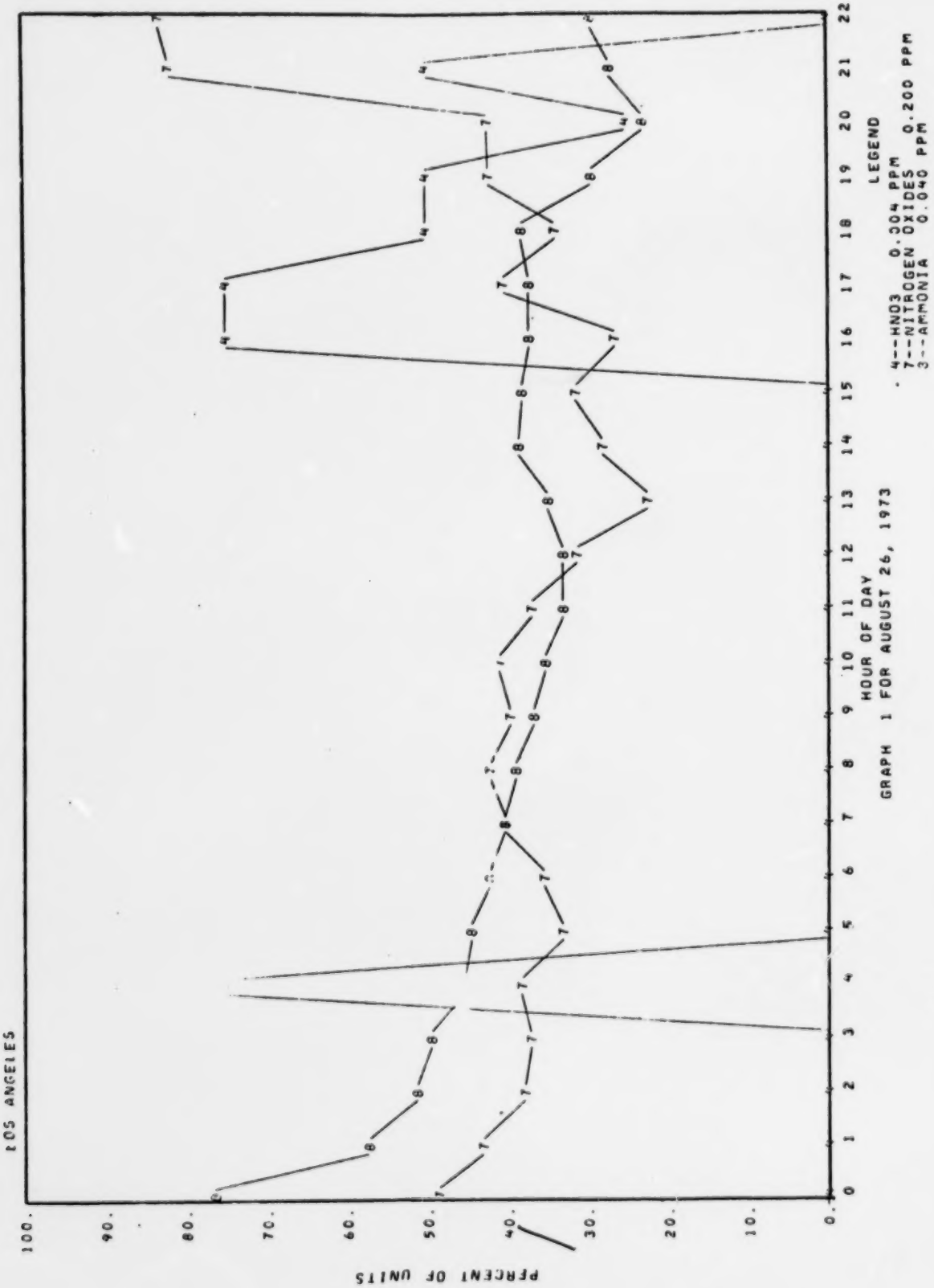
WEST COVINA DATA

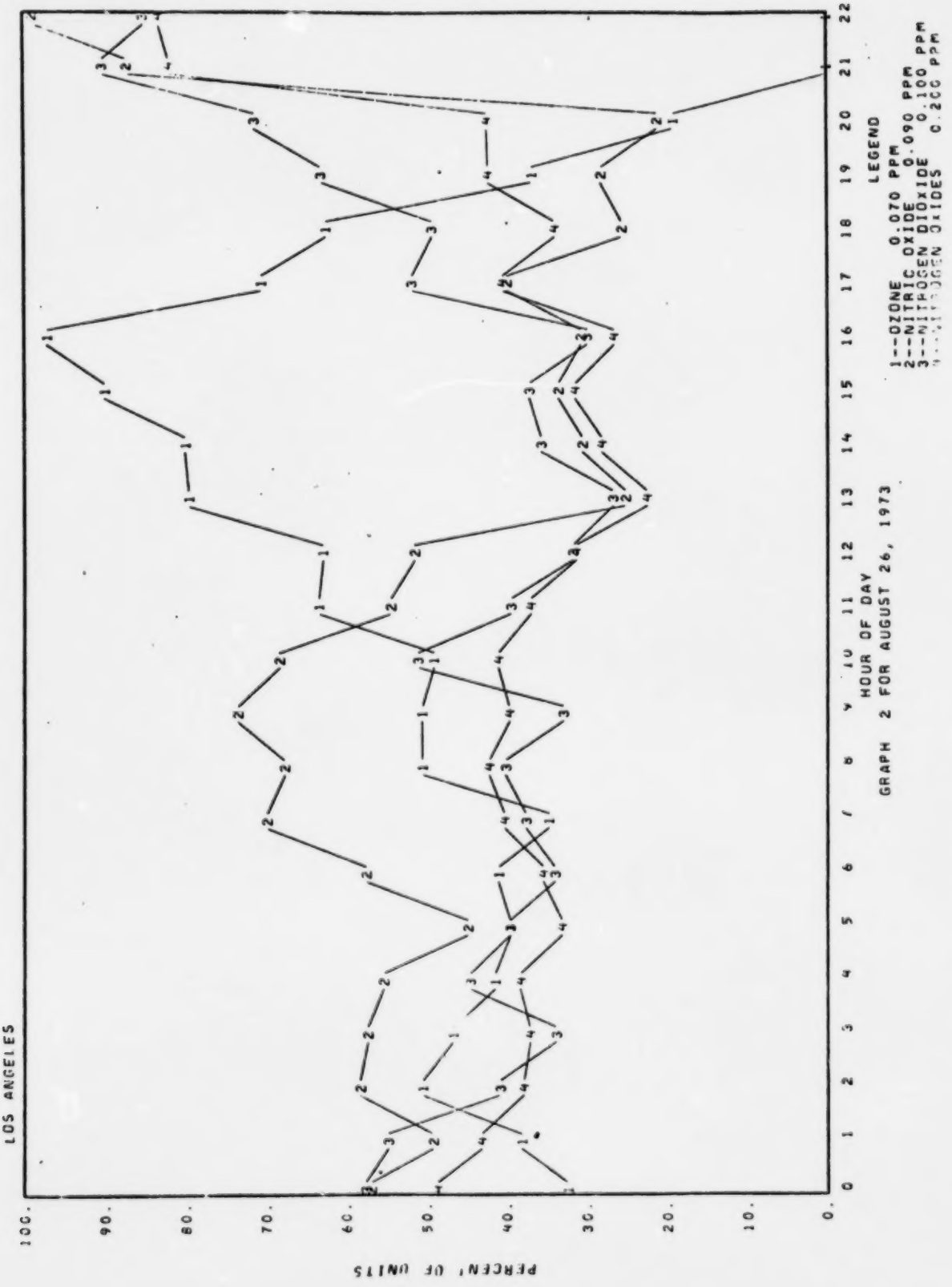

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 24, 1973
LEGEND
1--PAN 0.005 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.300 PPM
8--AMMONIA 0.003 PPM

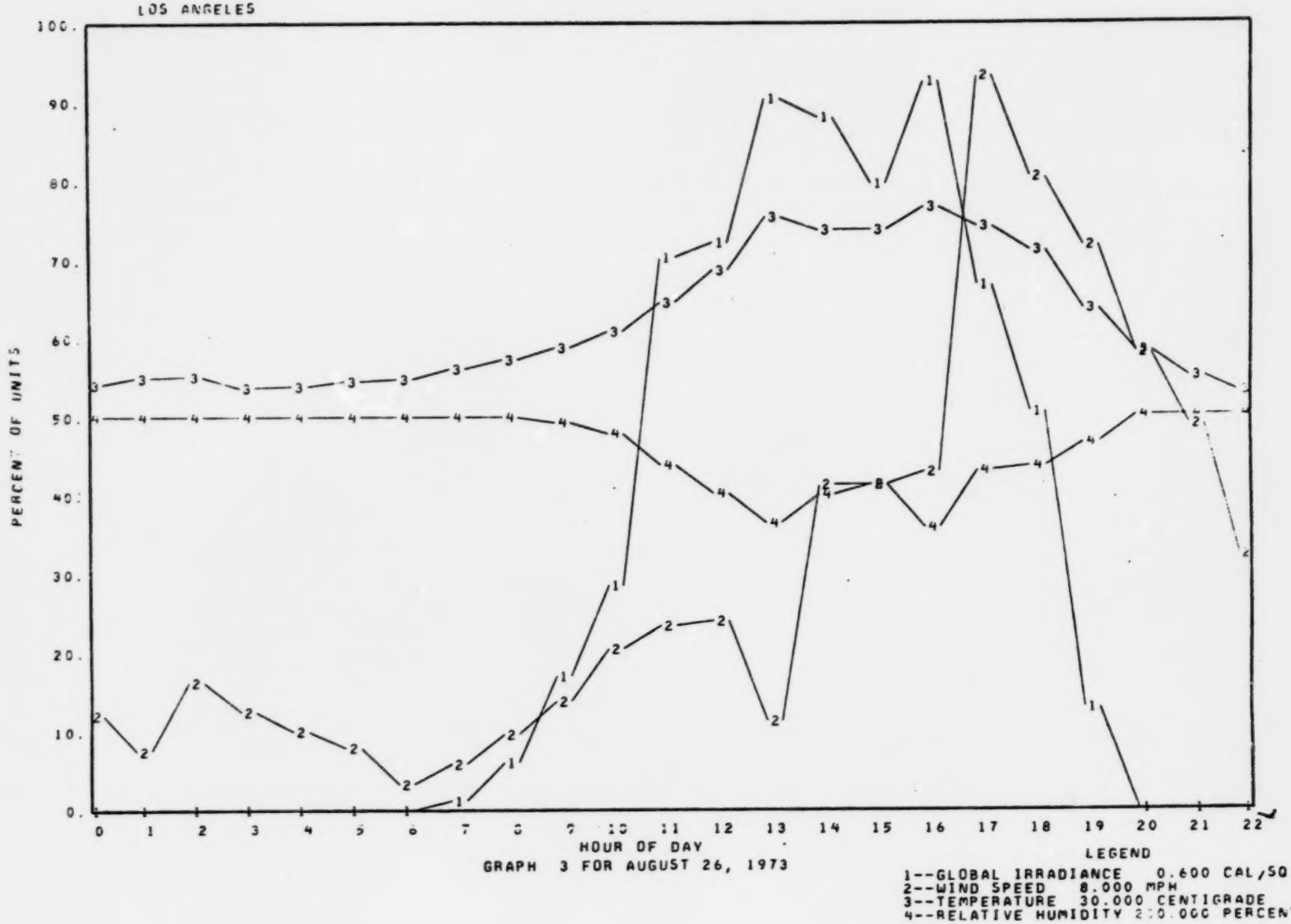

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 24, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.300 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.300 PPM

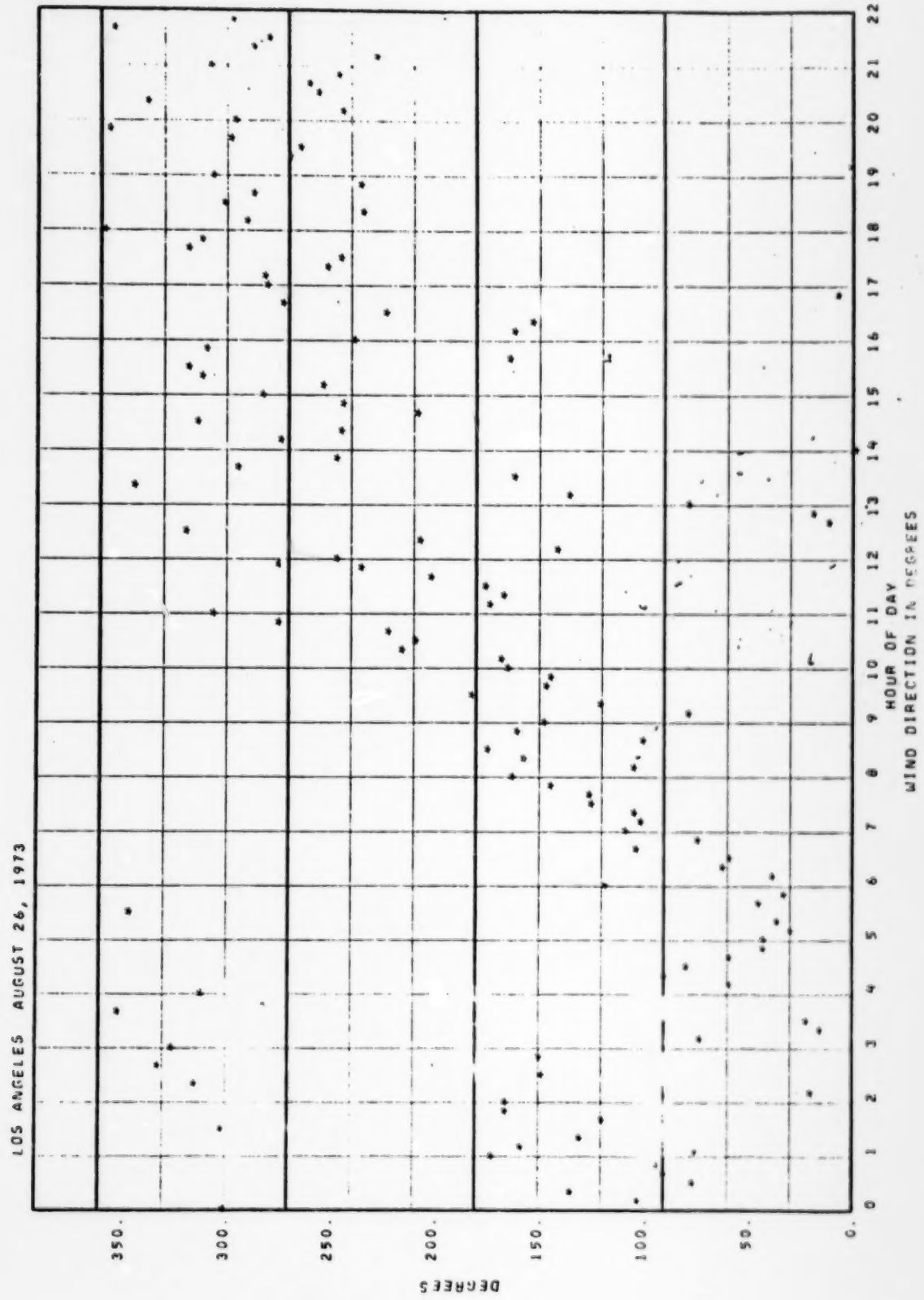

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 24, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

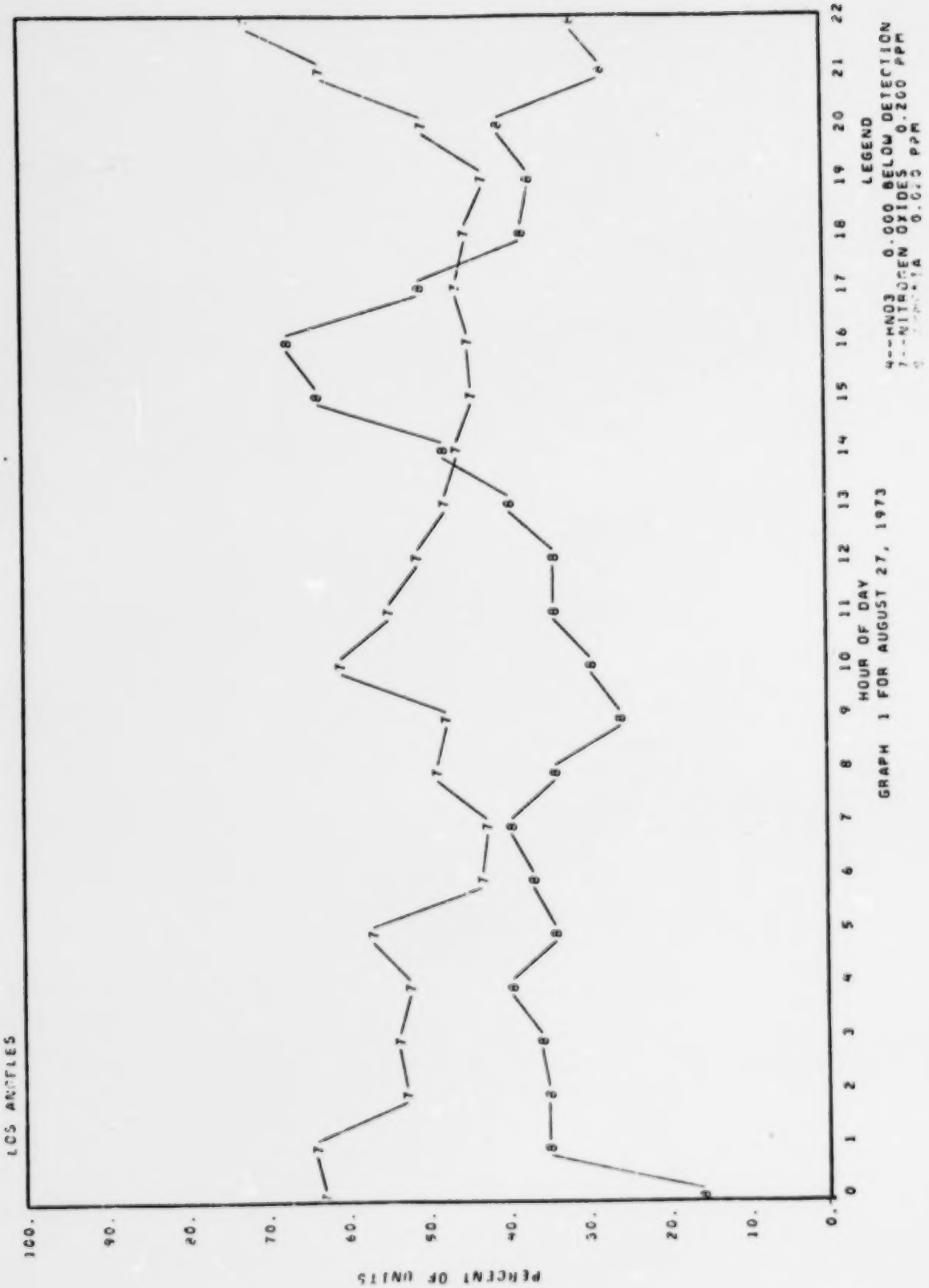

LOS ANGELES AUGUST 24, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

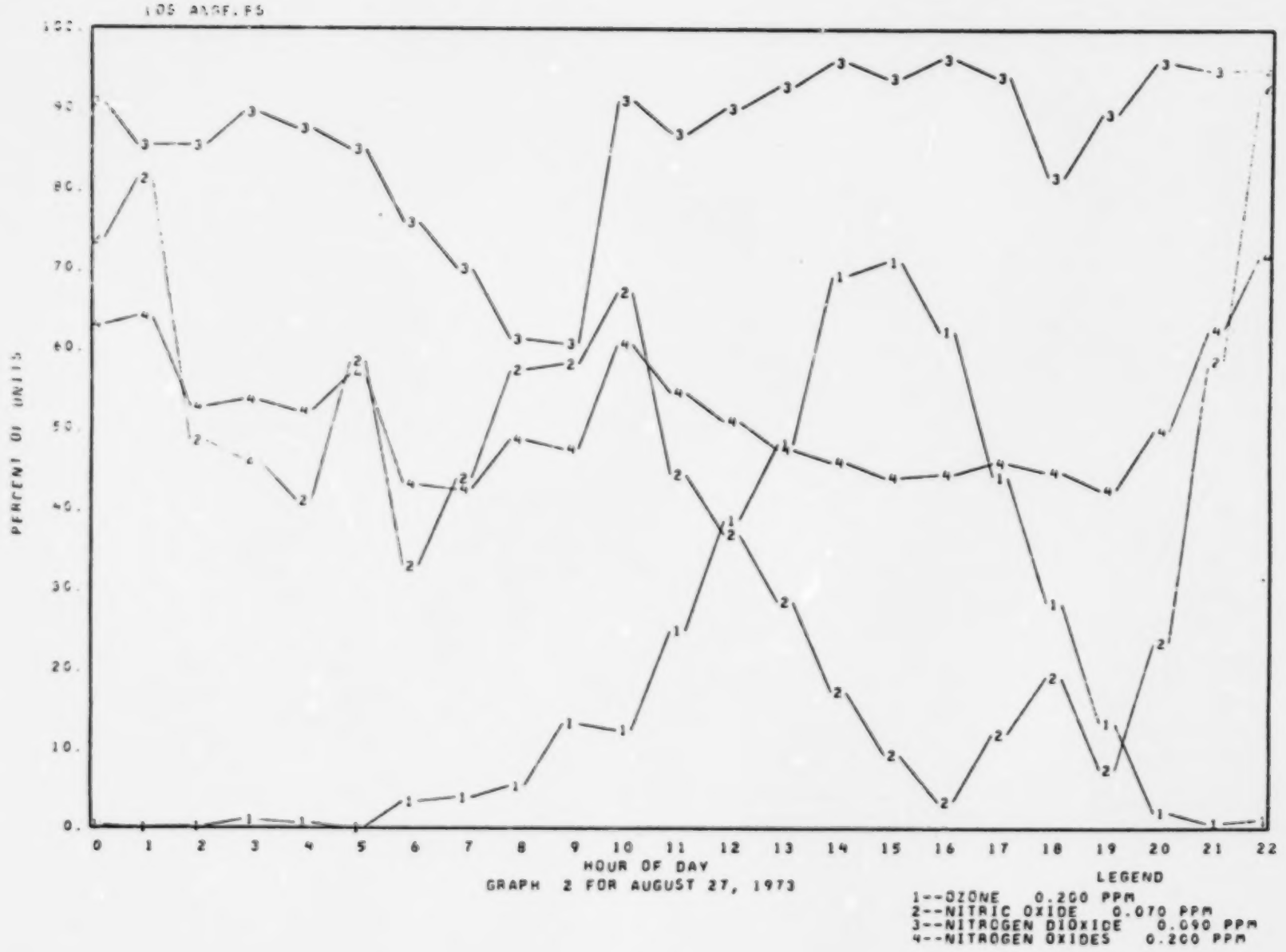

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 26, 1973
LEGEND
4--HNO3 0.304 PPM
7--NITROGEN OXIDES 0.200 PPM
3--AMMONIA 0.040 PPM


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR AUGUST 26, 1973
LEGEND
1--OZONE 0.070 PPM
2--NITRIC OXIDE 0.090 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.200 PPM

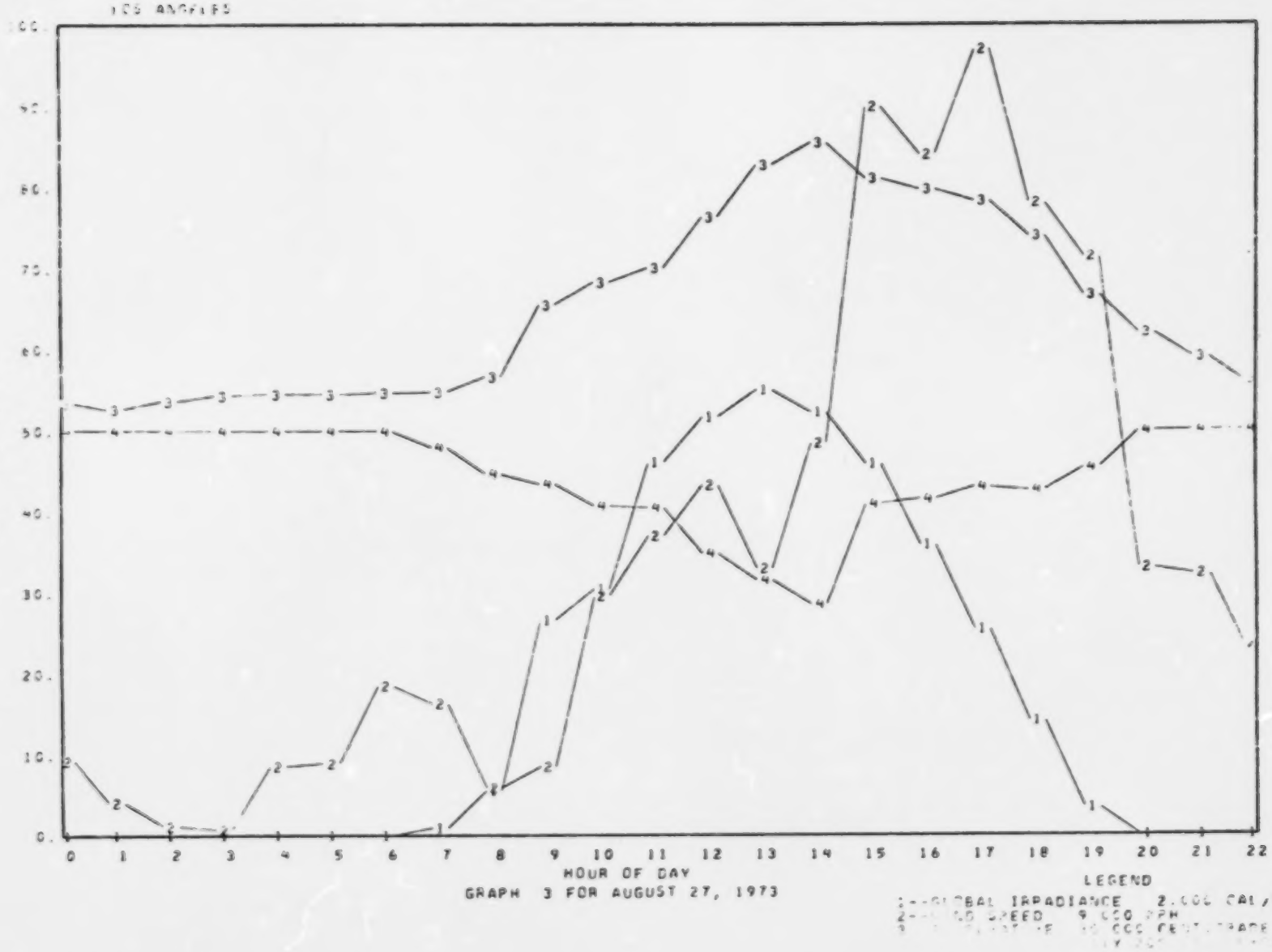

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 26, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.600 CAL/SQ.CM/MIN
2--WIND SPEED 8.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 100.000 PERCENT


LOS ANGELES AUGUST 26, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
DEGREES
350. 300. 250. 200. 150. 100. 50. 0.


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 27, 1973
LEGEND
4---HNO3 0.000 BELOW DETECTION
7---NITROGEN OXIDES 0.200 PPM
8---OZONE 0.000 PPM



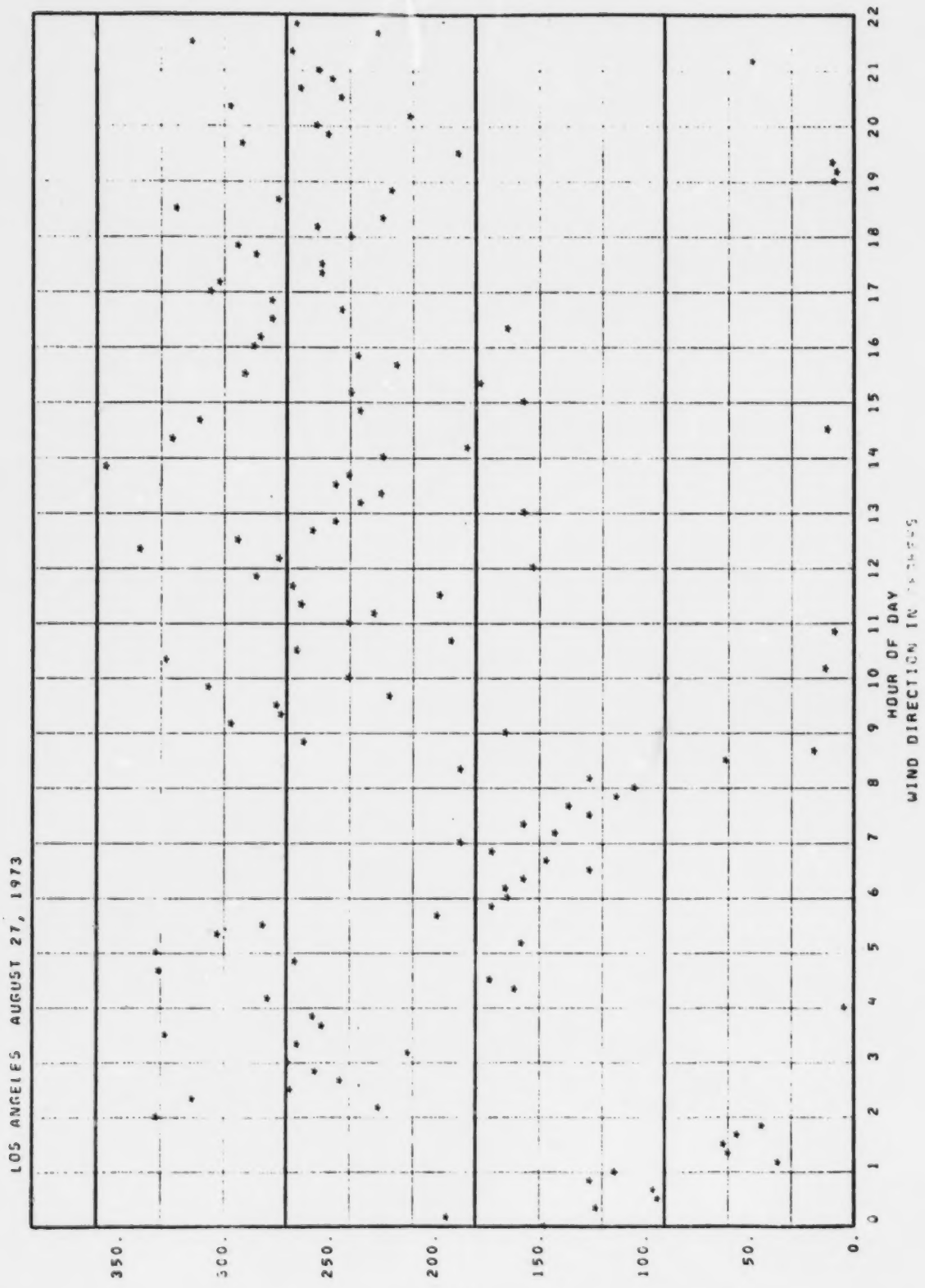
GRAPH 2 FOR AUGUST 27, 1973

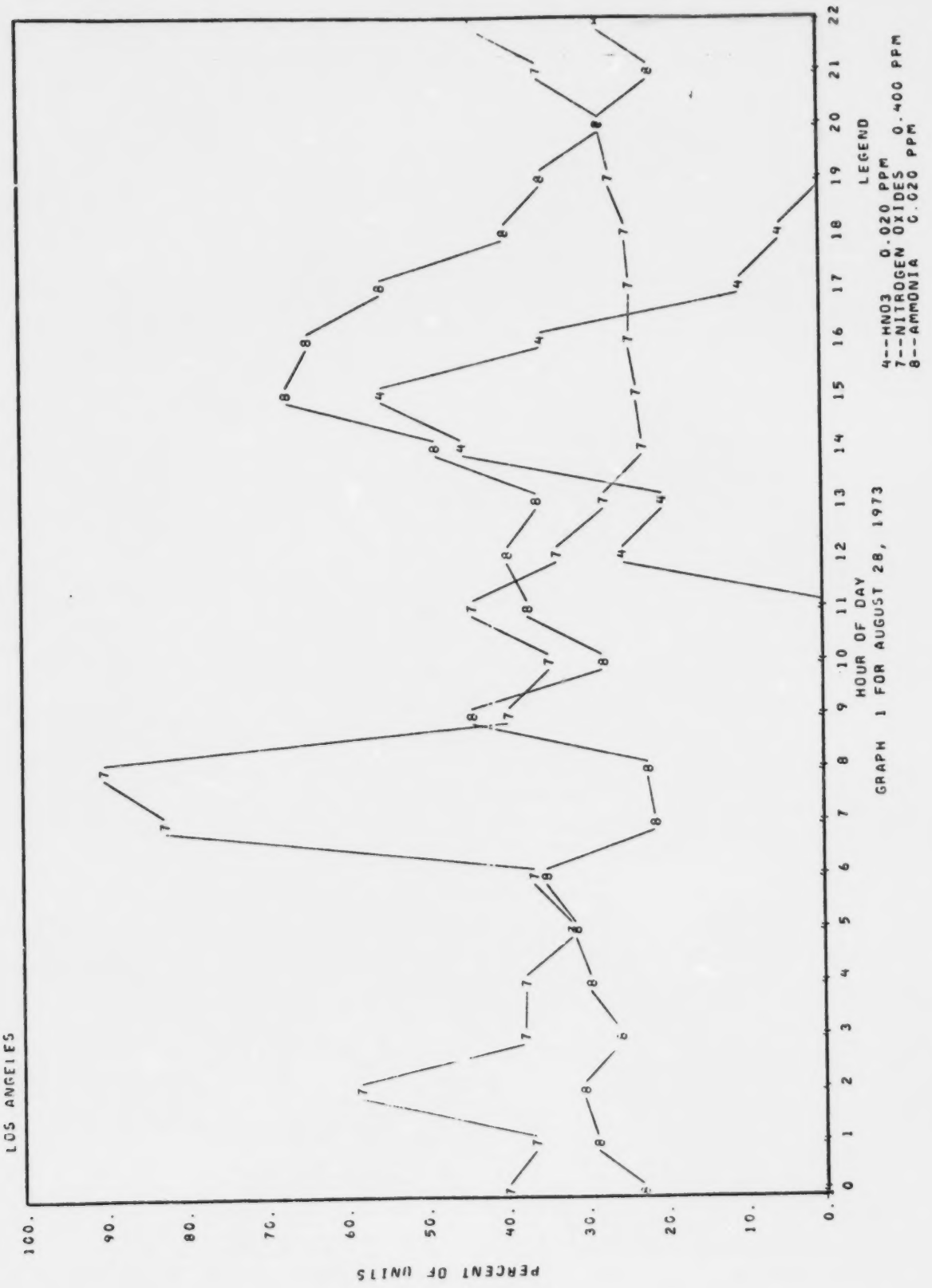


GRAPH 3 FOR AUGUST 27, 1973

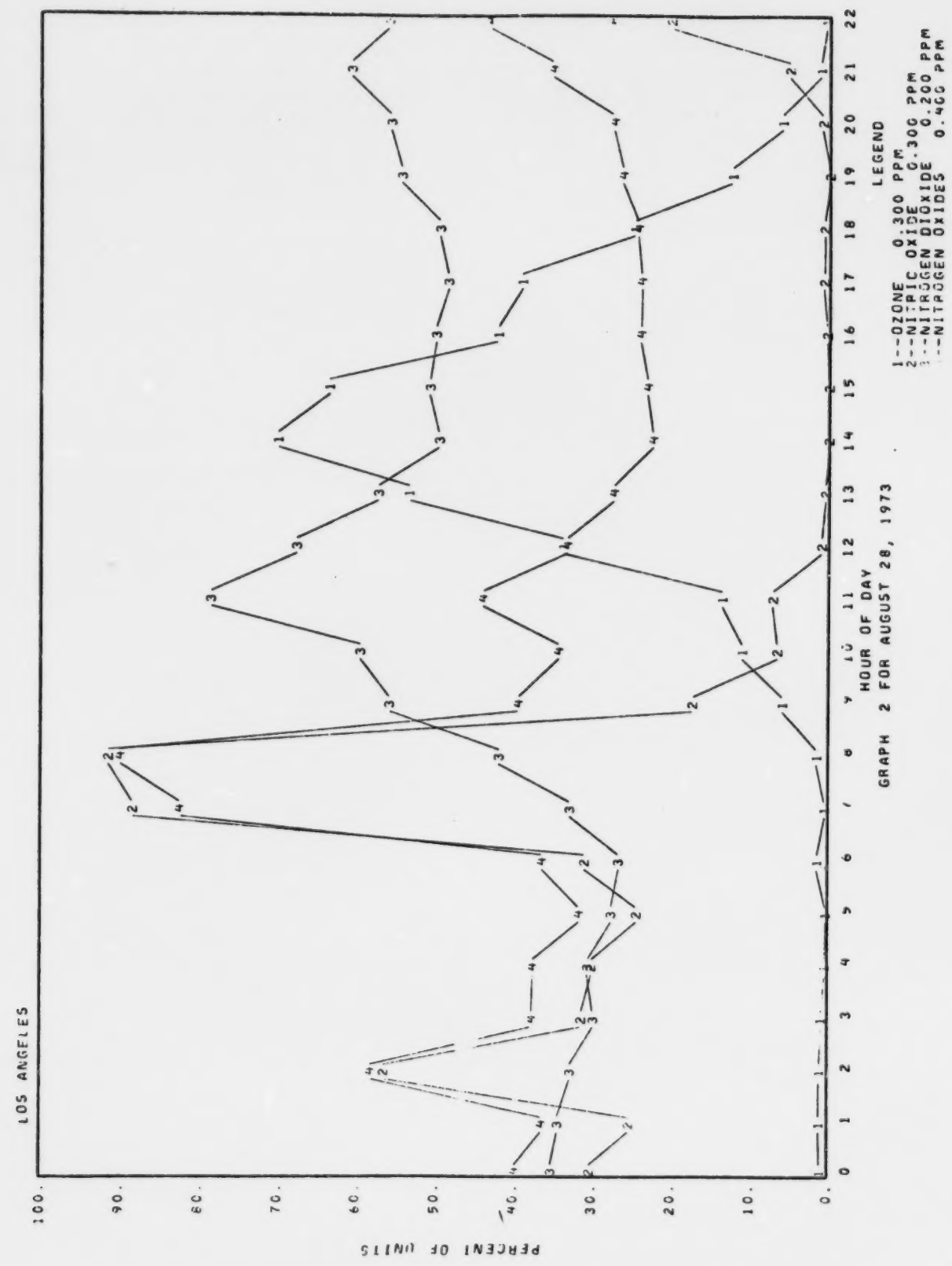
LEGEND

1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 9.000 MPH
3--PERCENTAGE OF 10.000 CENTIGRADE
4--RELATIVE HUMIDITY PERCENT

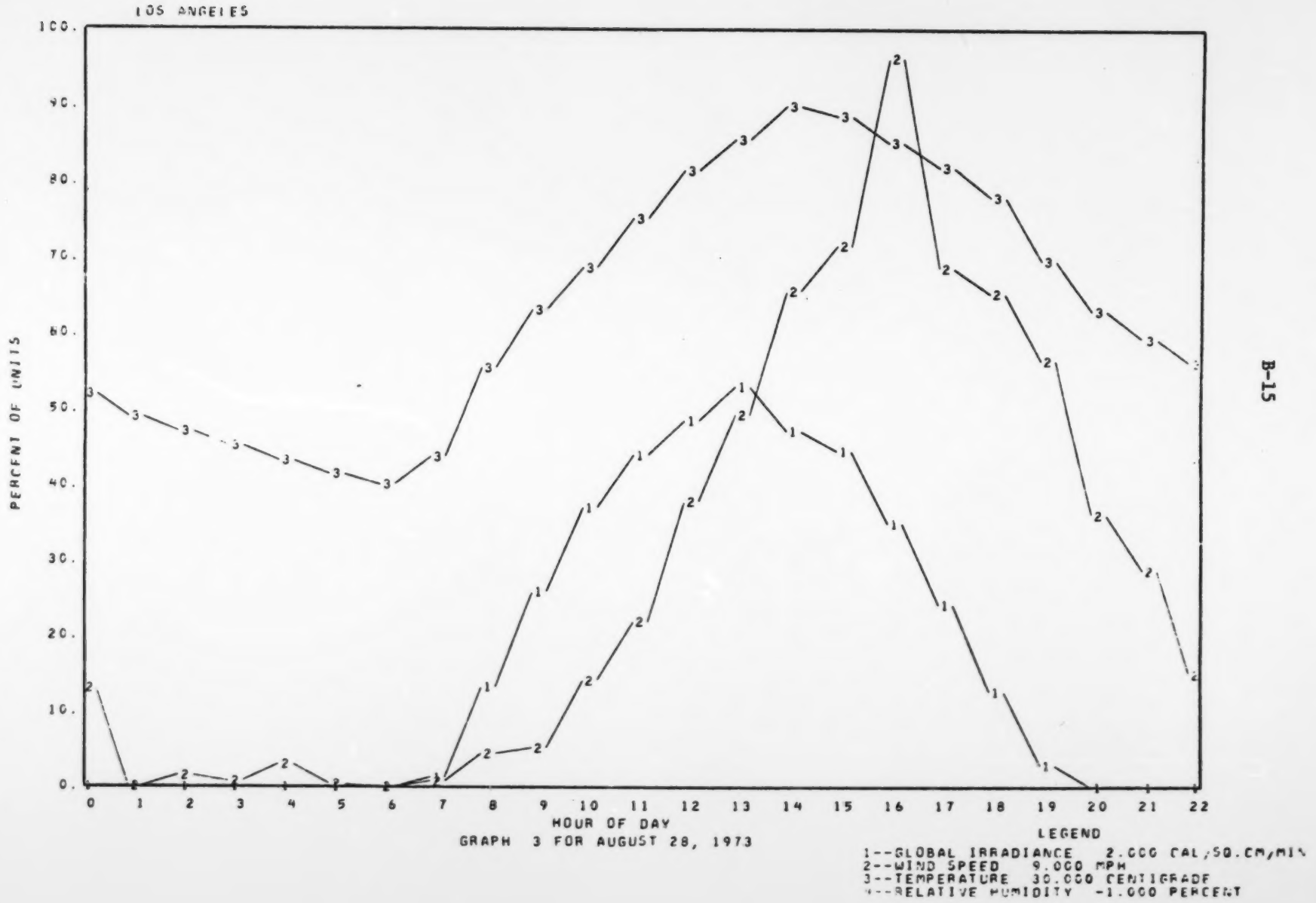

LOS ANGELES AUGUST 27, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

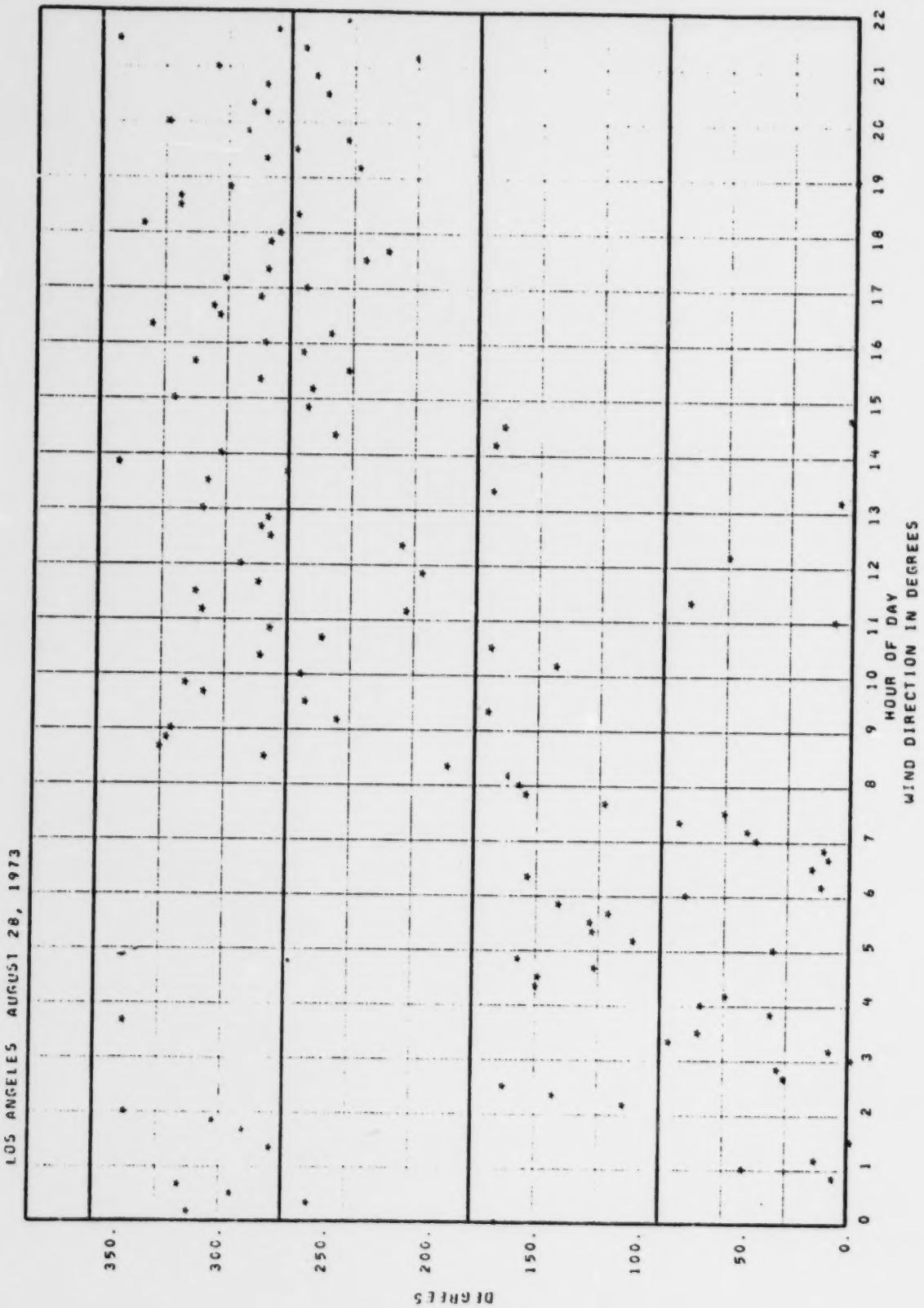


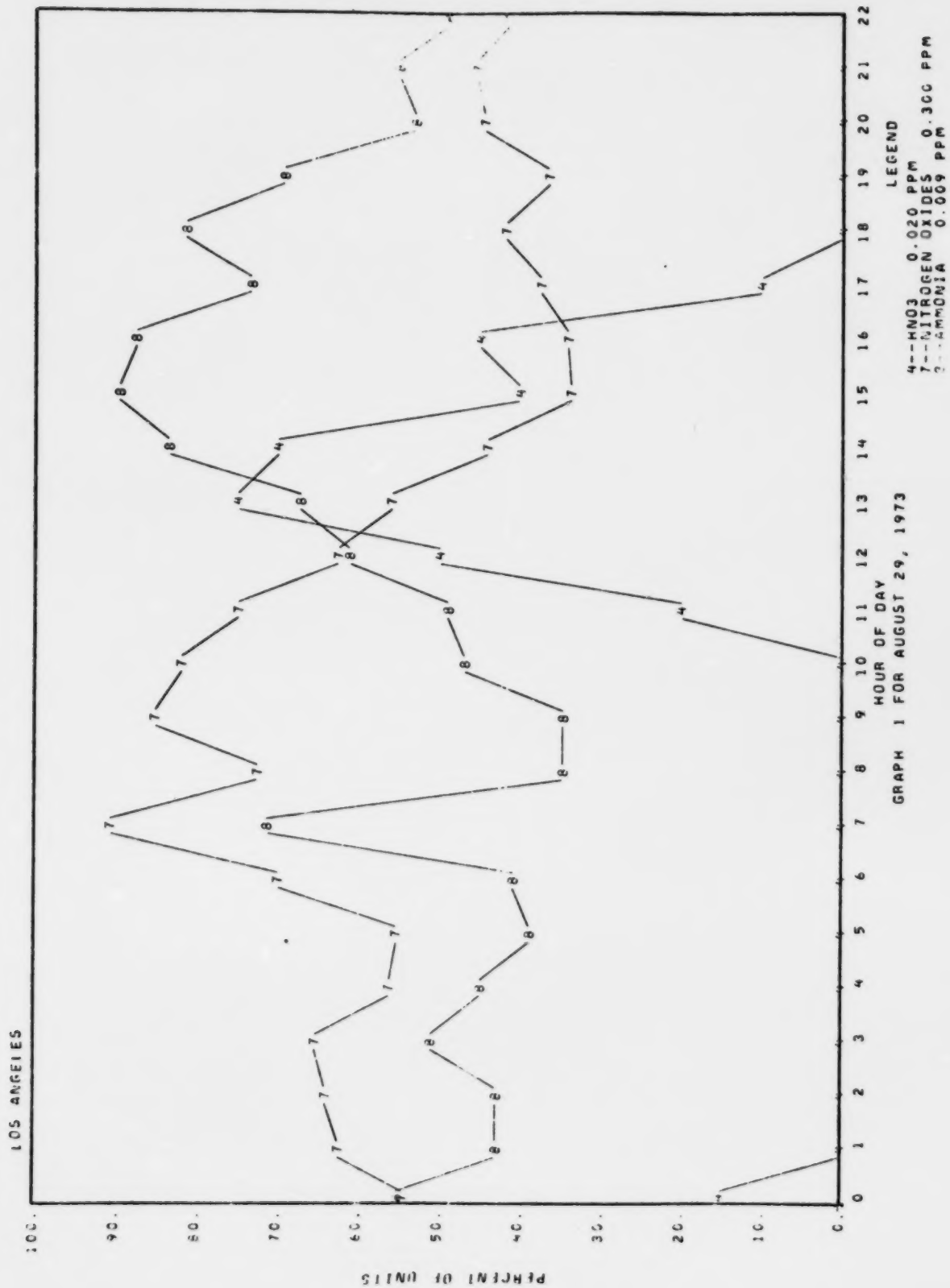
GRAPH 1 FOR AUGUST 28, 1973

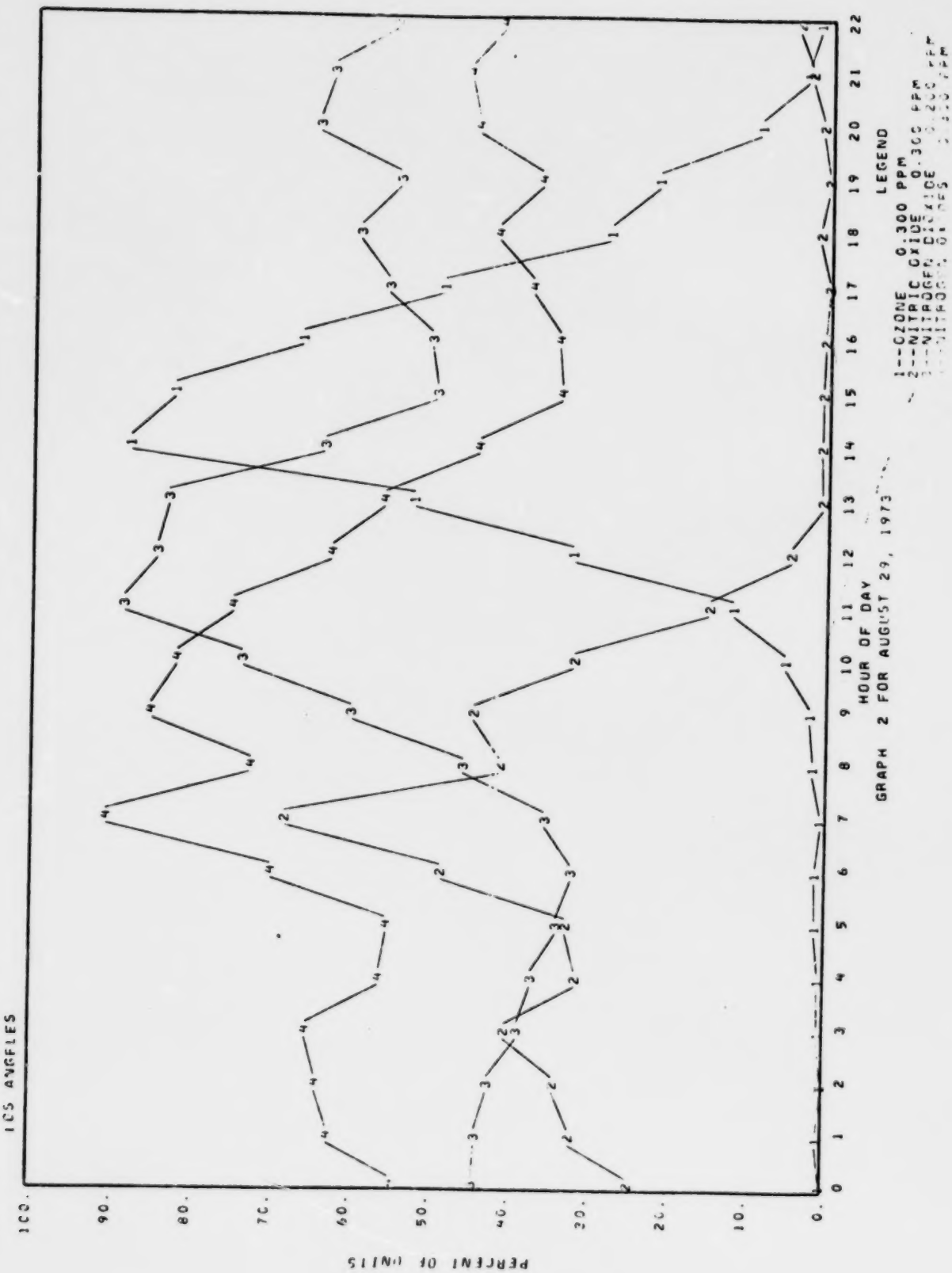


GRAPH 2 FOR AUGUST 28, 1973

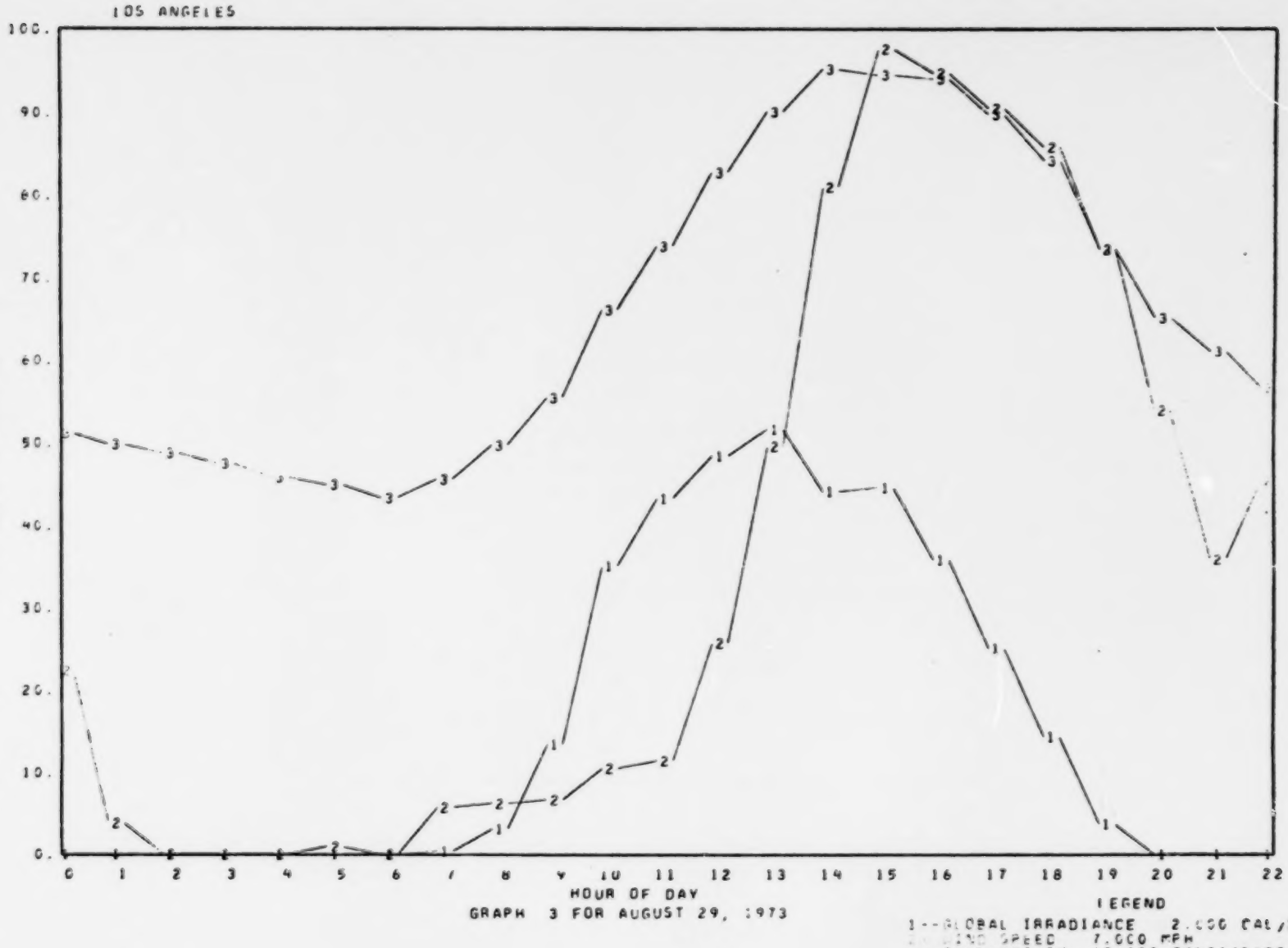

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 28, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 9.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY -1.000 PERCENT


LOS ANGELES AUGUST 28, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
0. 50. 100. 150. 200. 250. 300. 350.
DEGREES

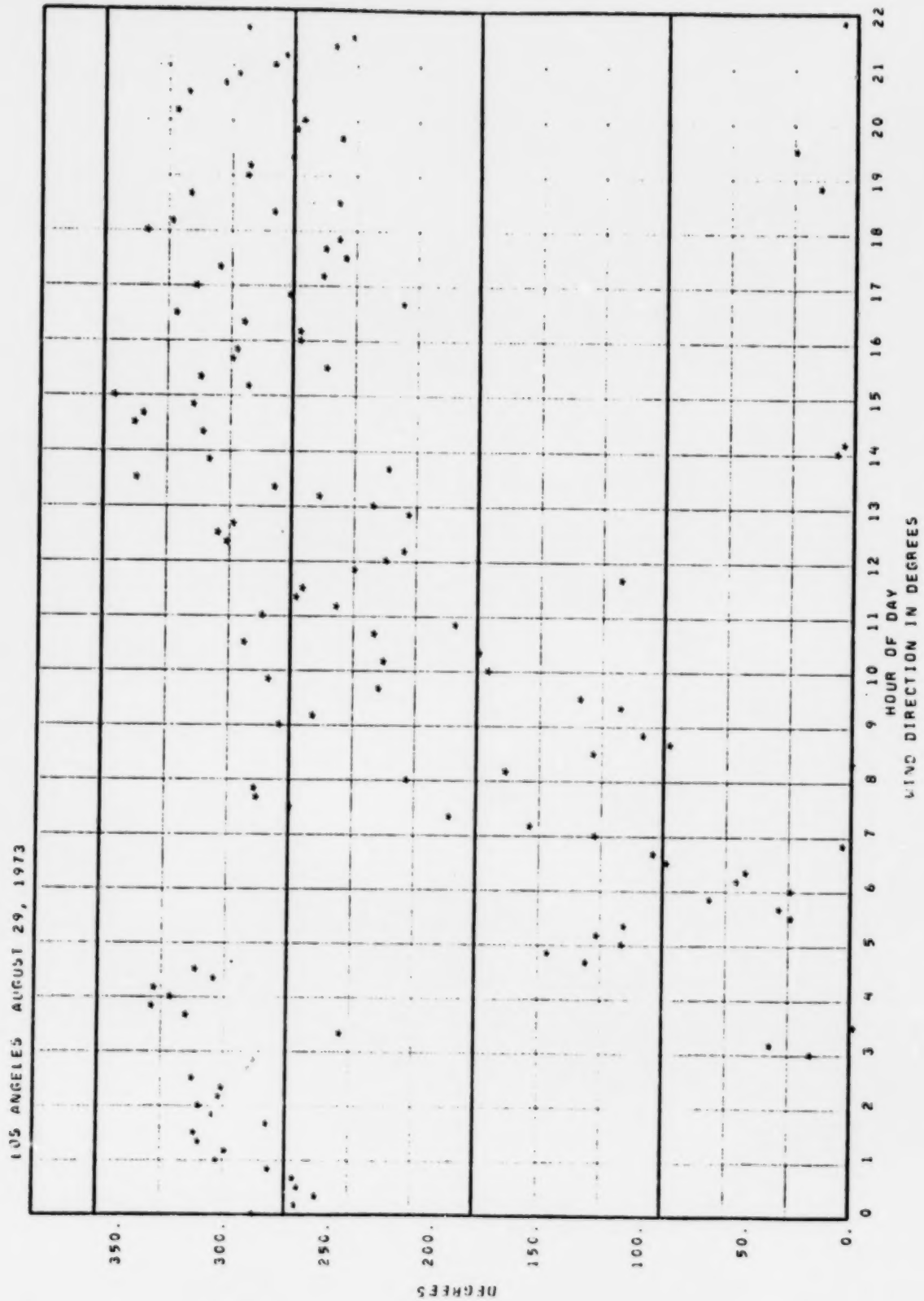

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 29, 1973
LEGEND
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.300 PPM
8--AMMONIA 0.009 PPM

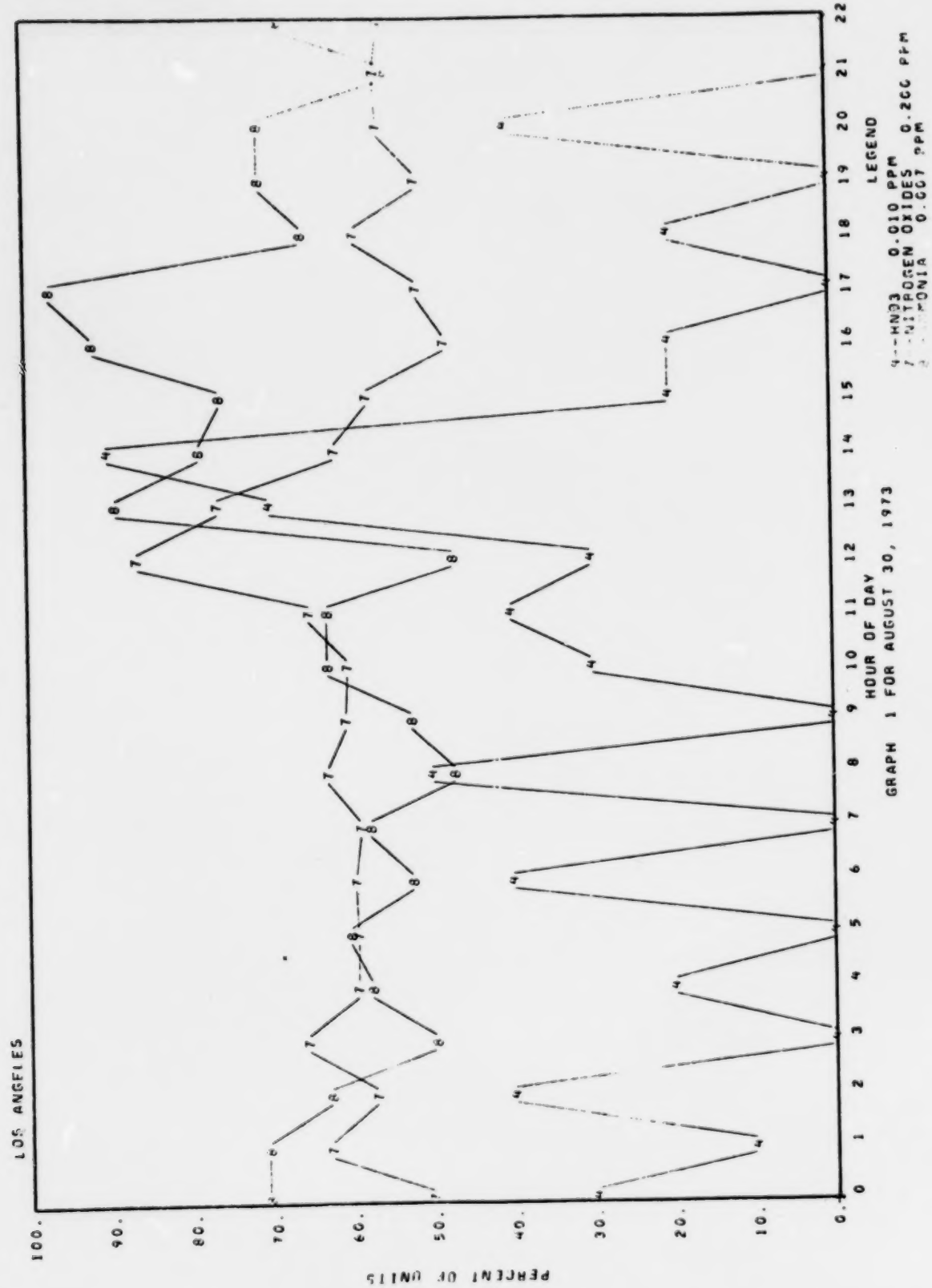


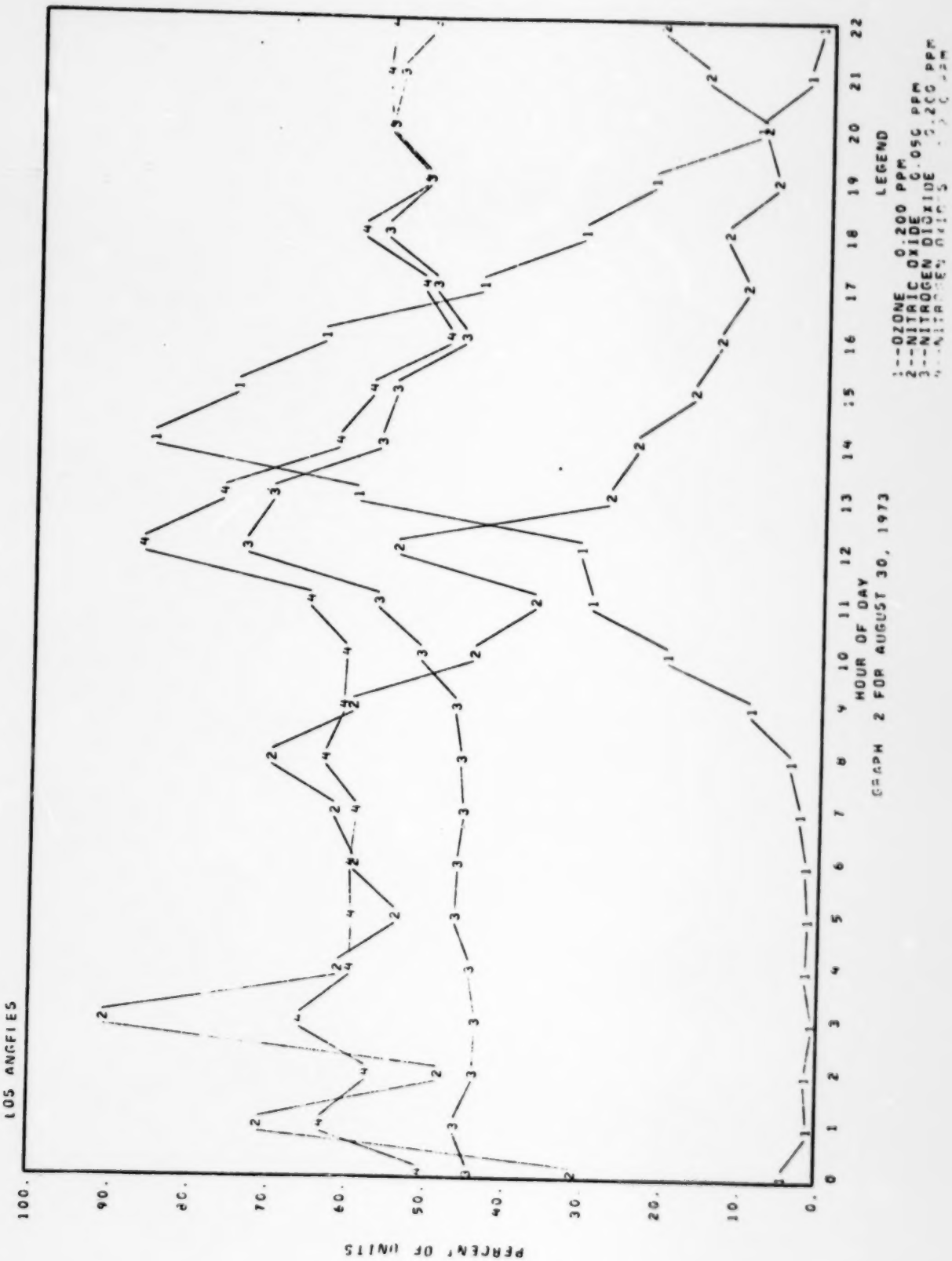
GRAPH 2 FOR AUGUST 29, 1973



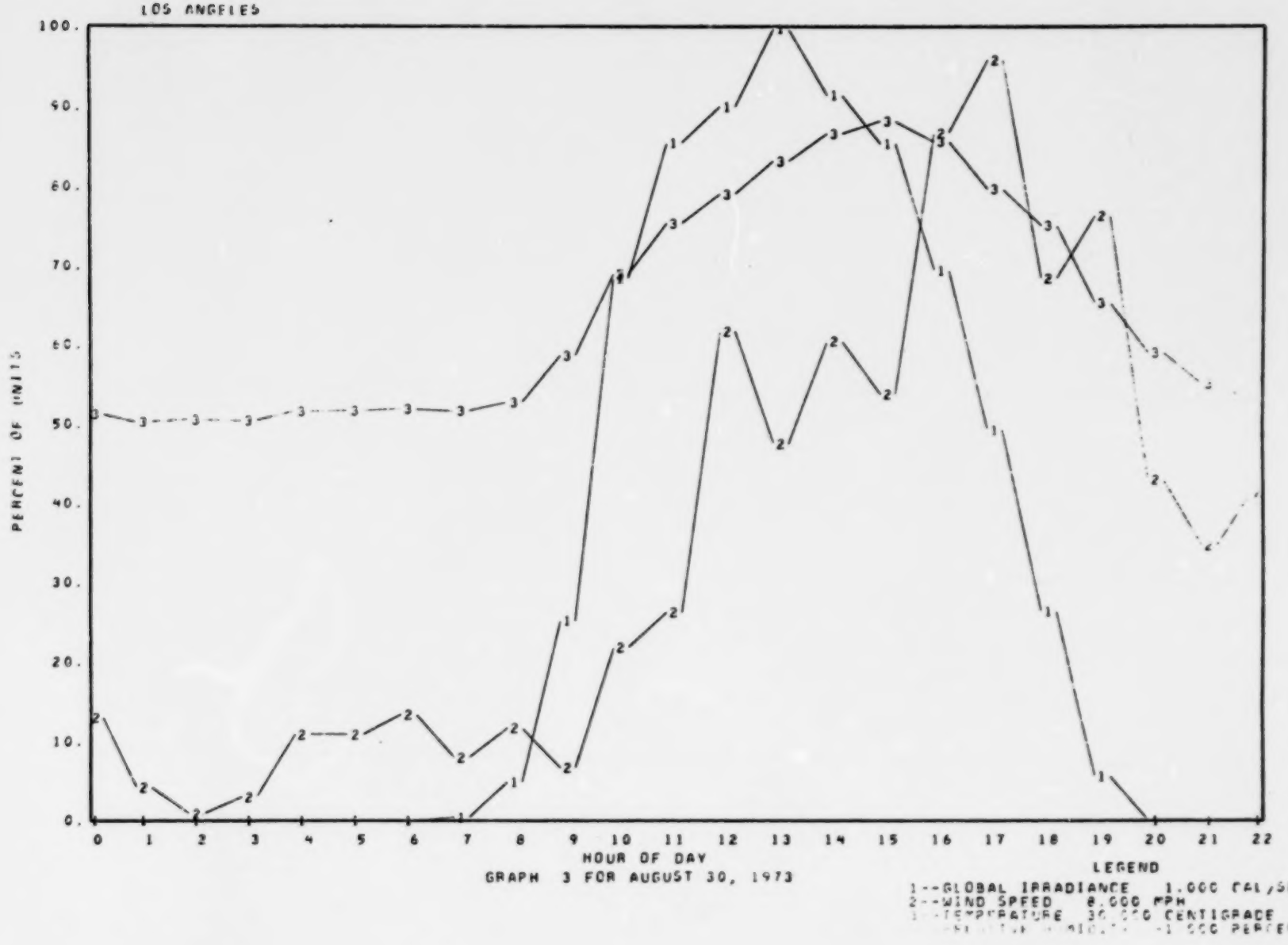
GRAPH 3 FOR AUGUST 29, 1973


LOS ANGELES AUGUST 29, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

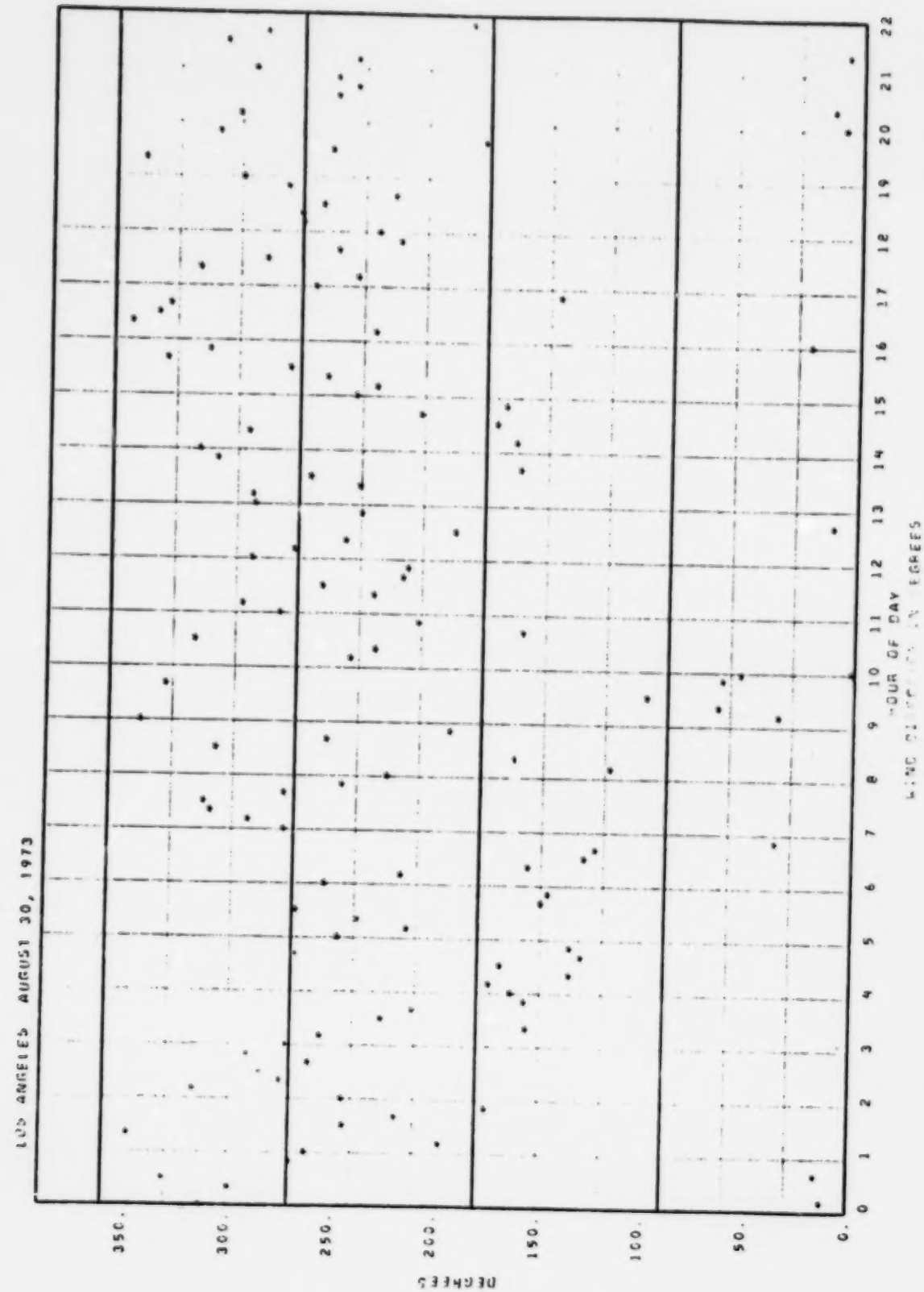

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 30, 1973
LEGEND
4--HNO3 0.010 PPM
7--NITROGEN OXIDES 0.266 PPM
8--AMMONIA 0.007 PPM

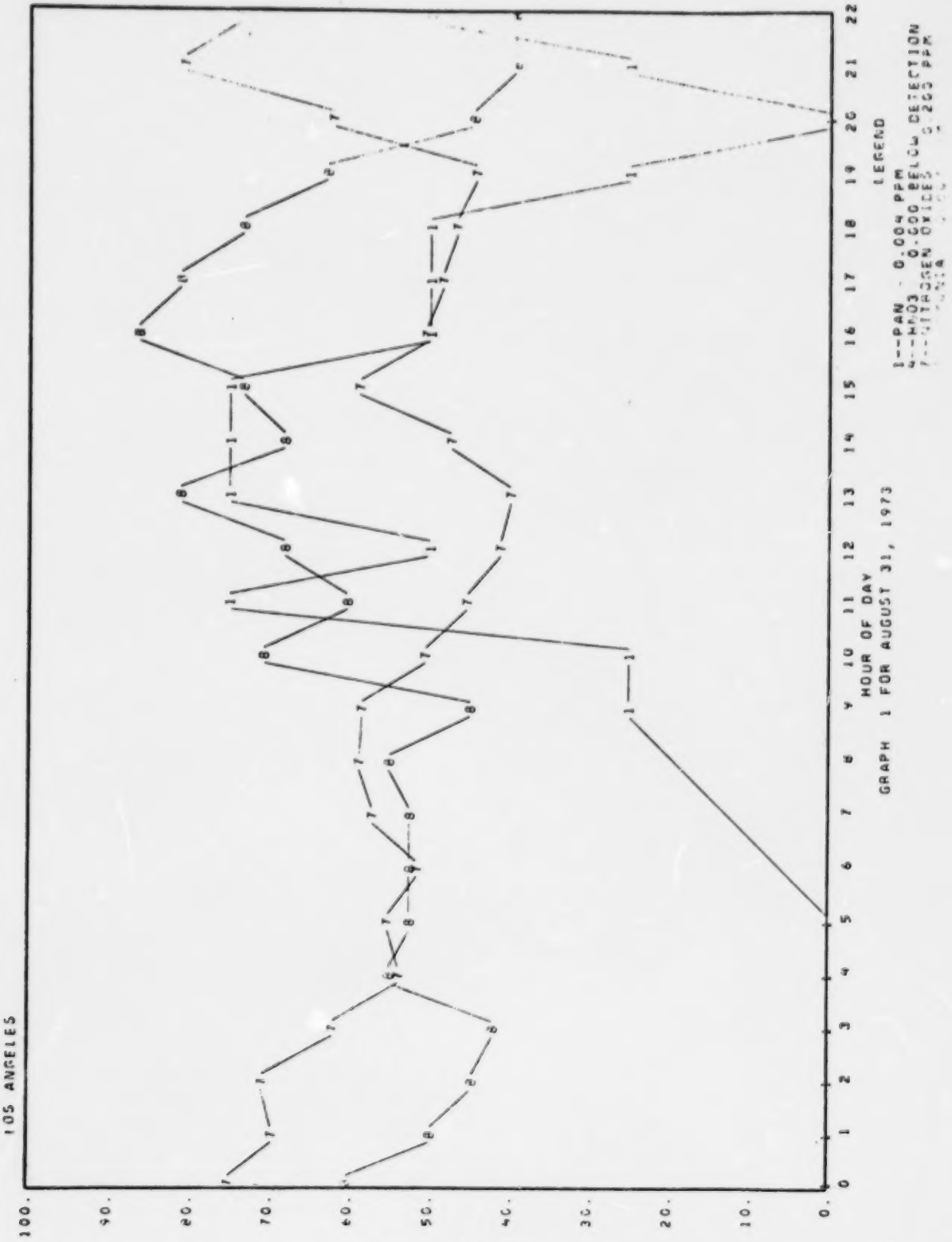


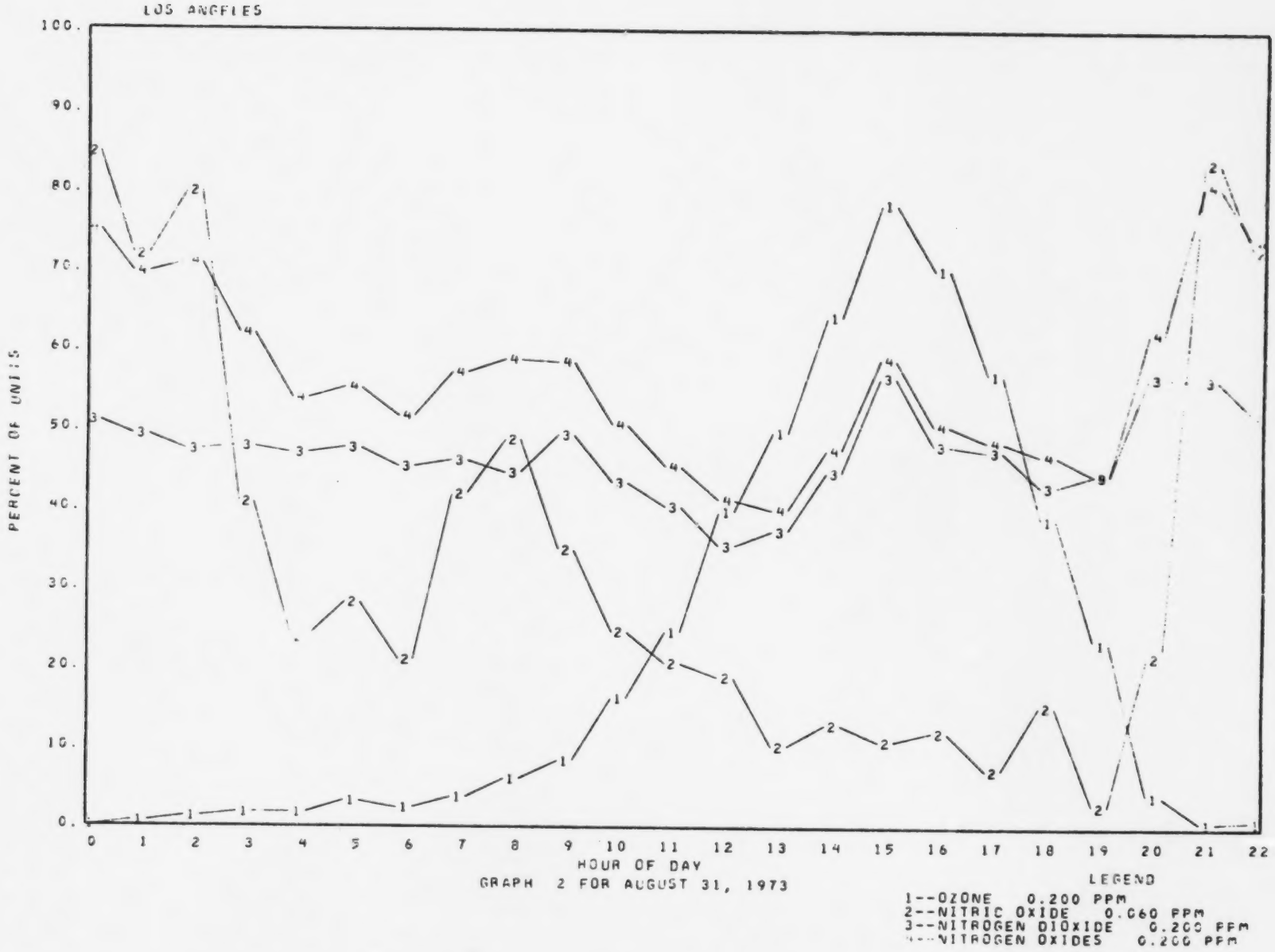
GRAPH 2 FOR AUGUST 30, 1973



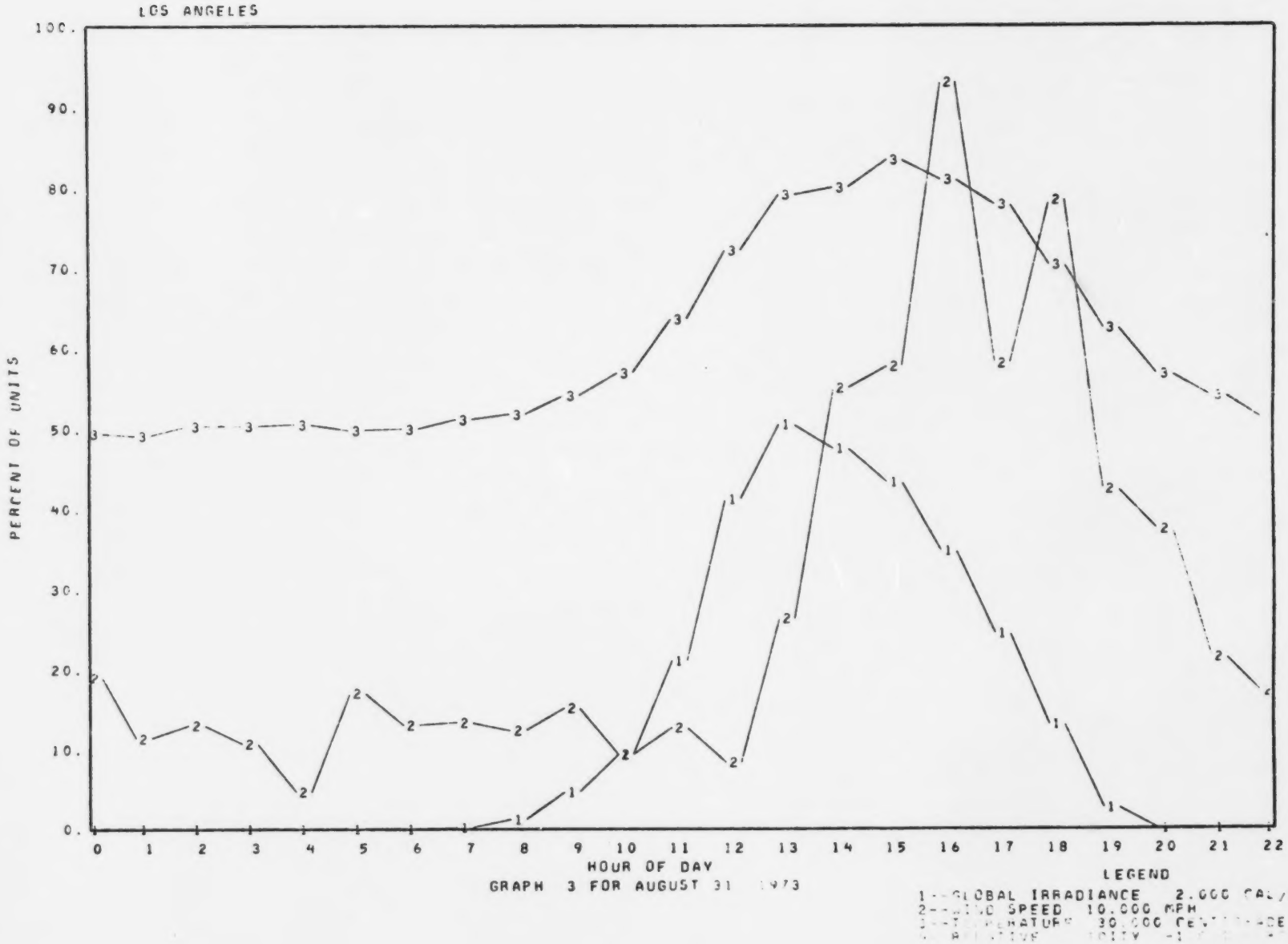
GRAPH 3 FOR AUGUST 30, 1973

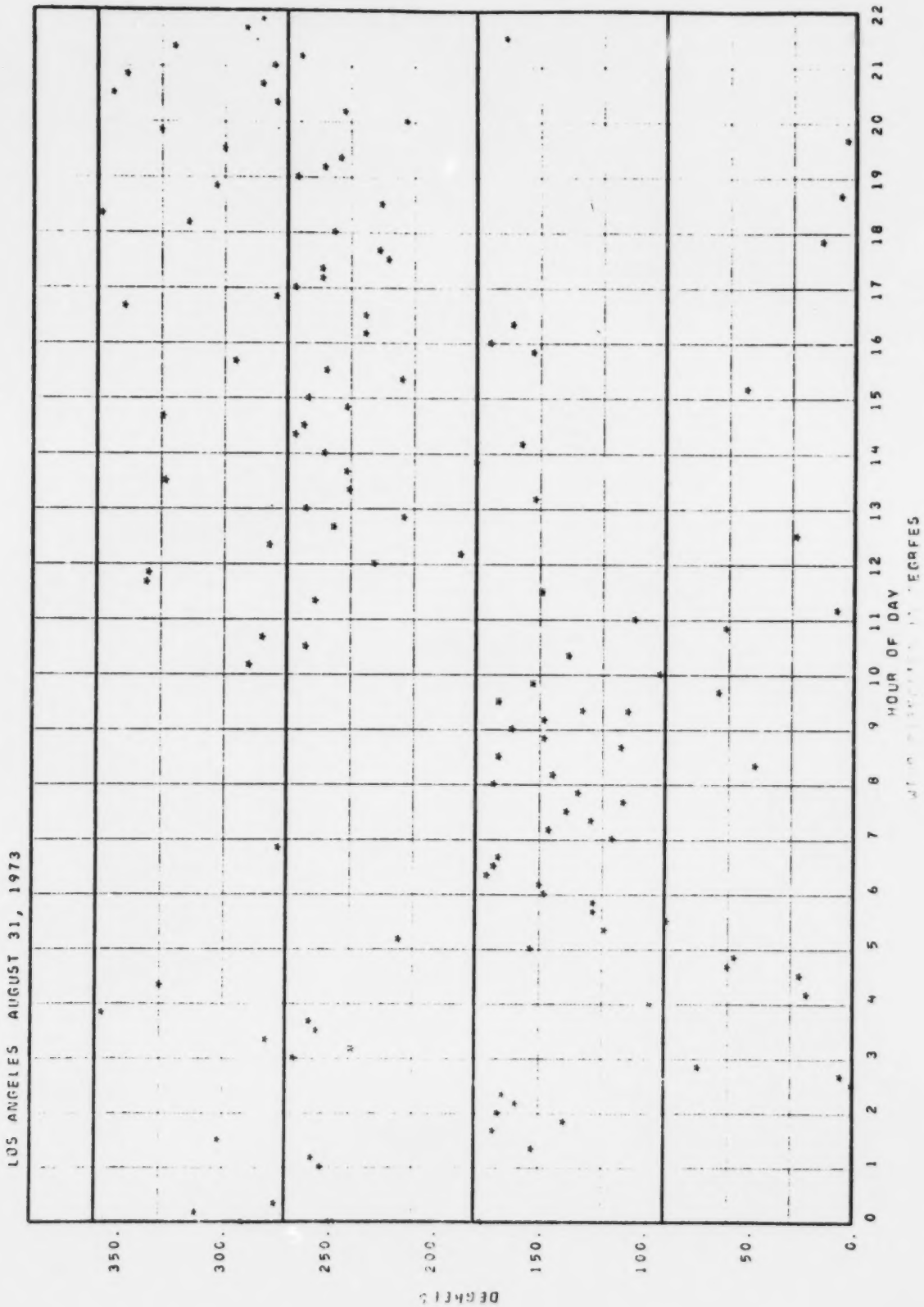

LOS ANGELES AUGUST 30, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

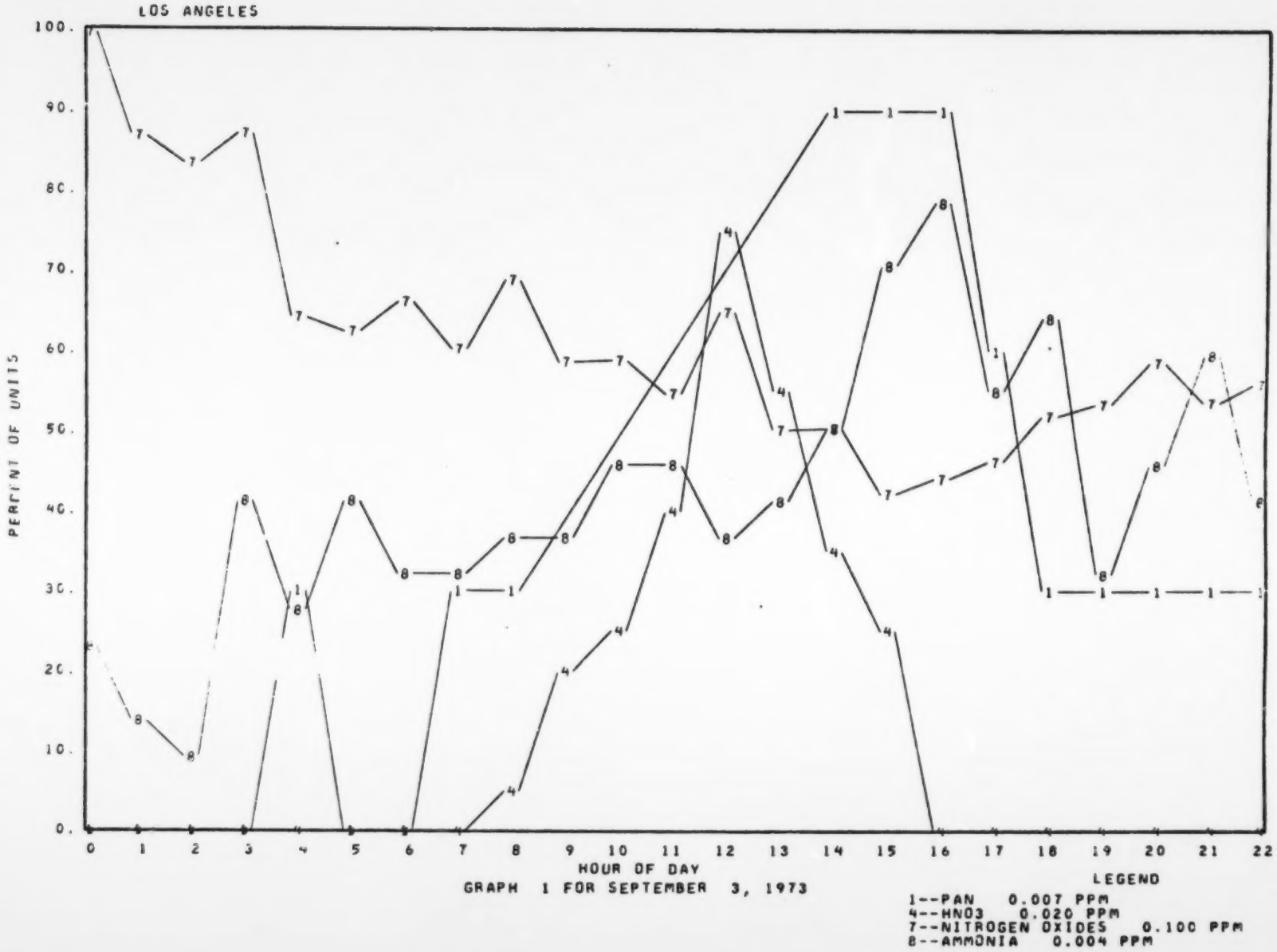

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR AUGUST 31, 1973
LEGEND
1--PAN - 0.004 PPM
4--HNO3 - 0.000 BELOW DETECTION
7--NITROGEN OXIDES - 0.260 PPM

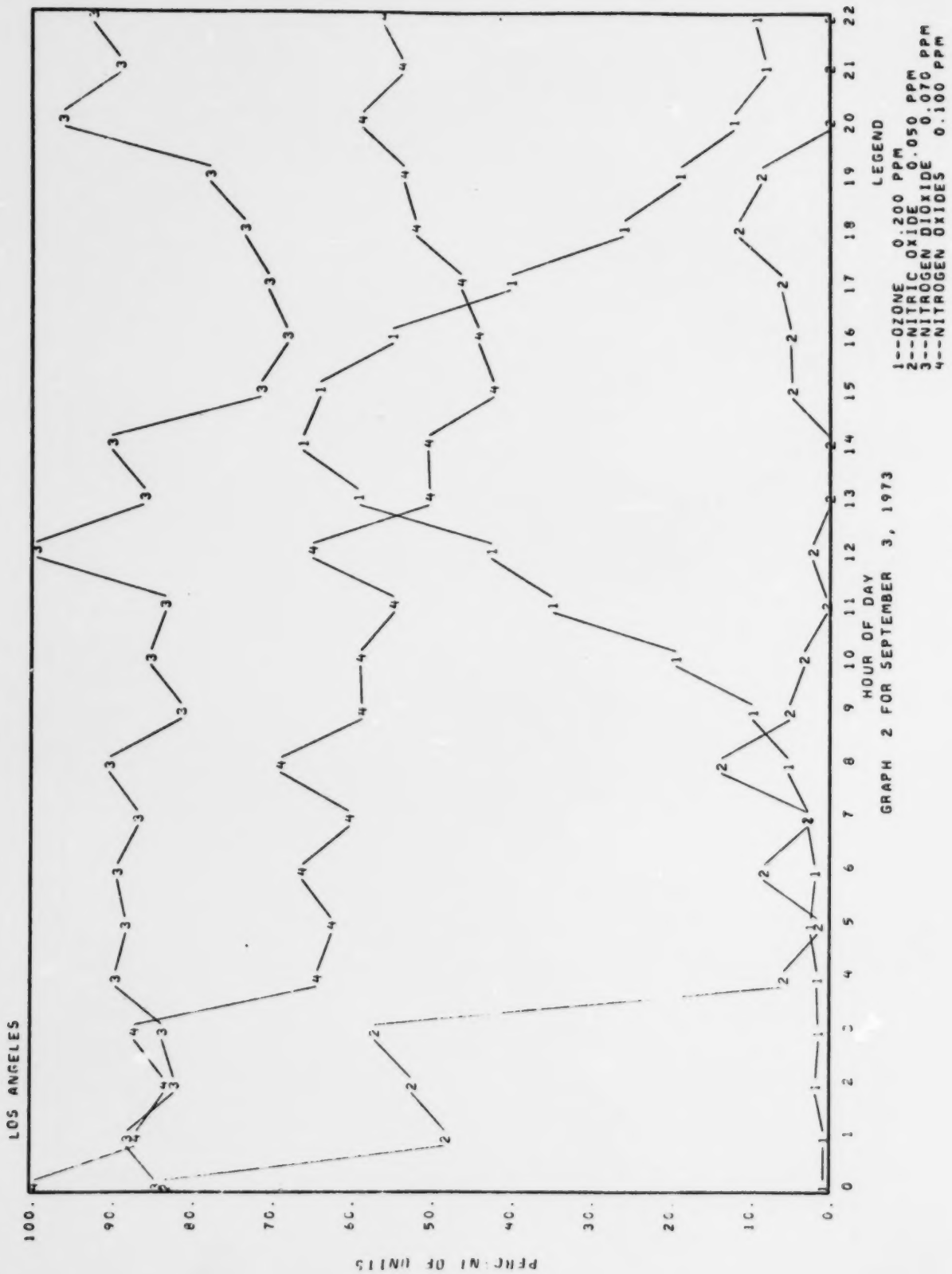


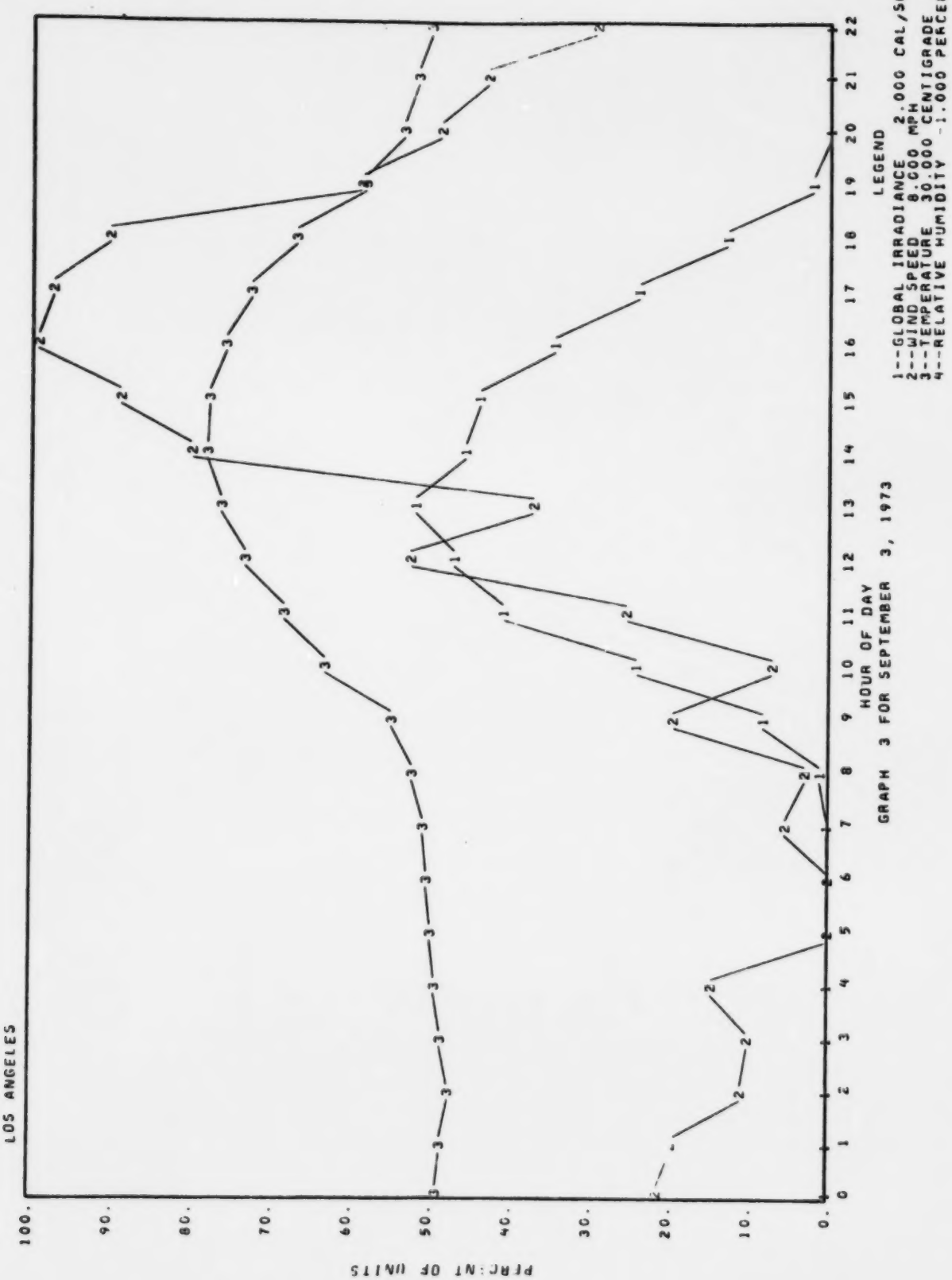
GRAPH 2 FOR AUGUST 31, 1973

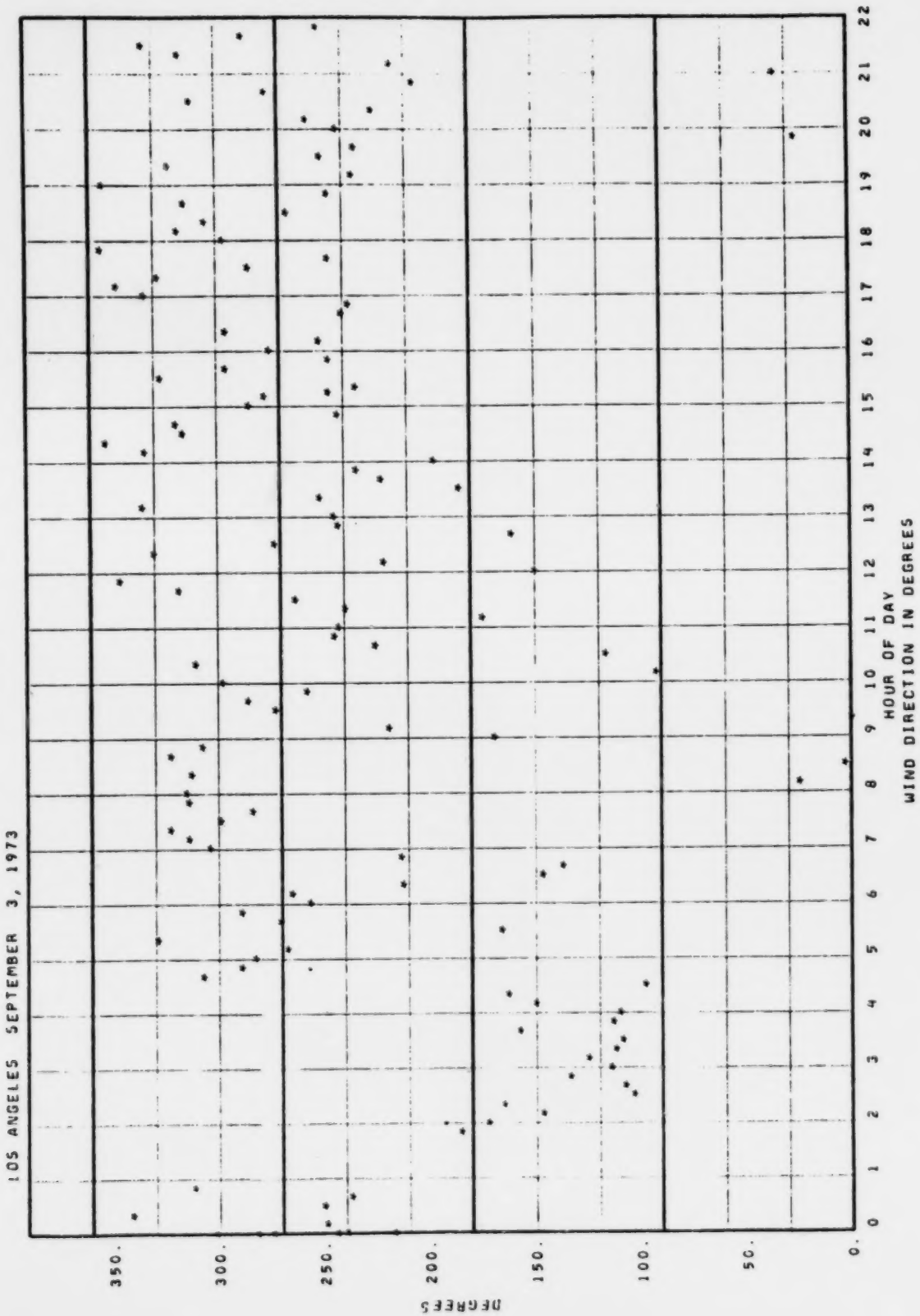

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR AUGUST 31 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 10.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE

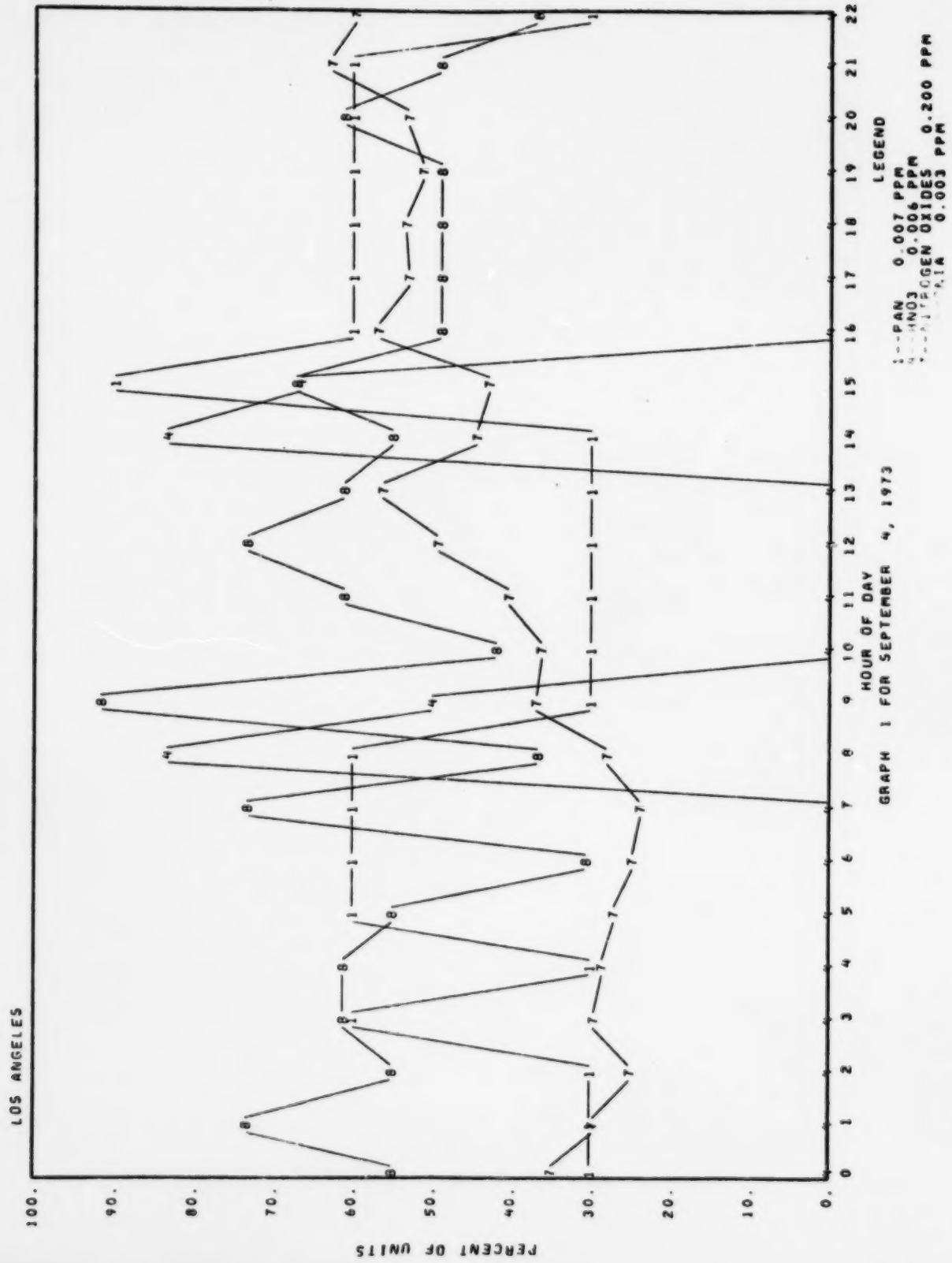

LOS ANGELES AUGUST 31, 1973
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

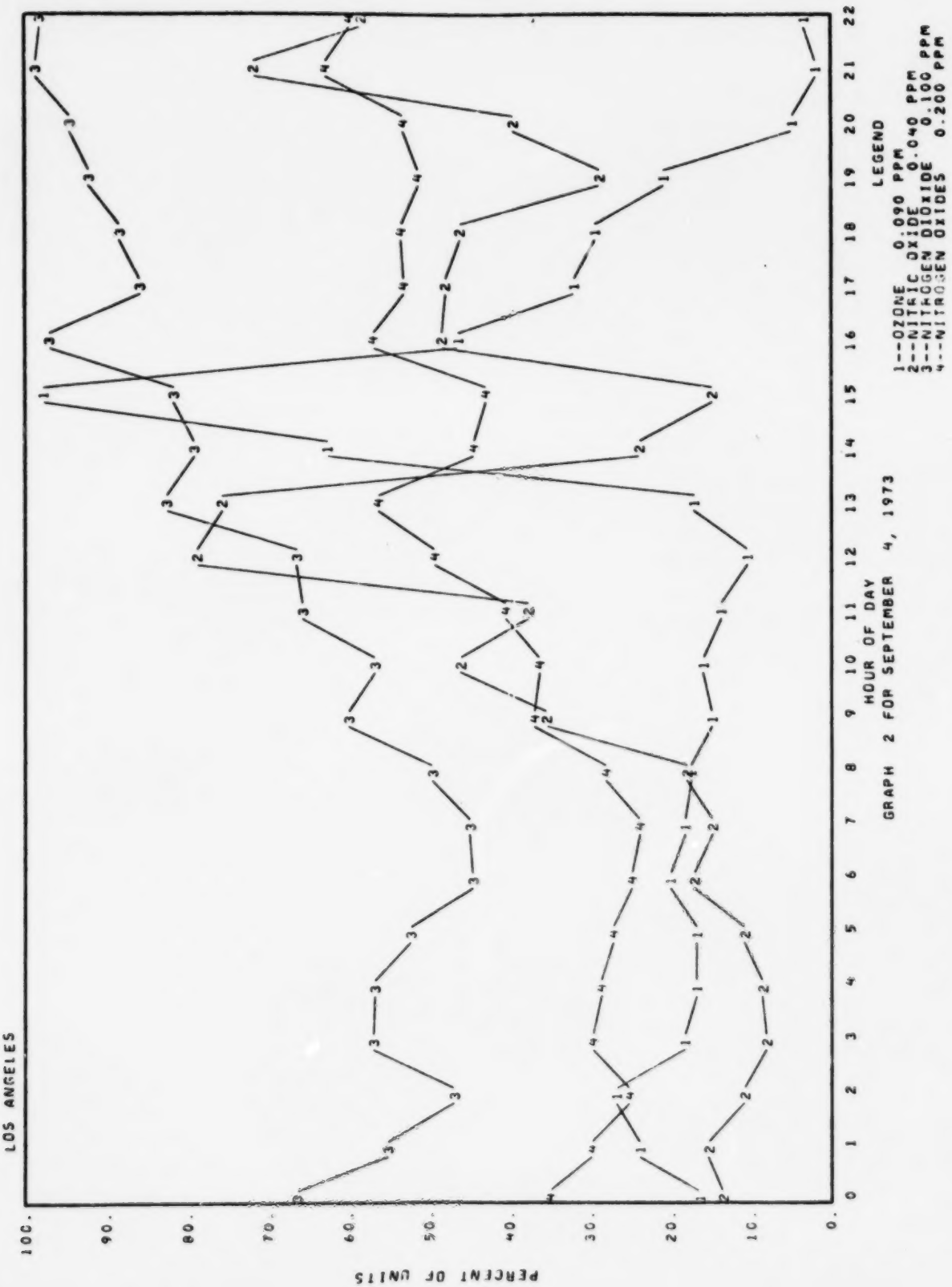

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 3, 1973
LEGEND
1--PAN 0.007 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.100 PPM
8--AMMONIA 0.004 PPM

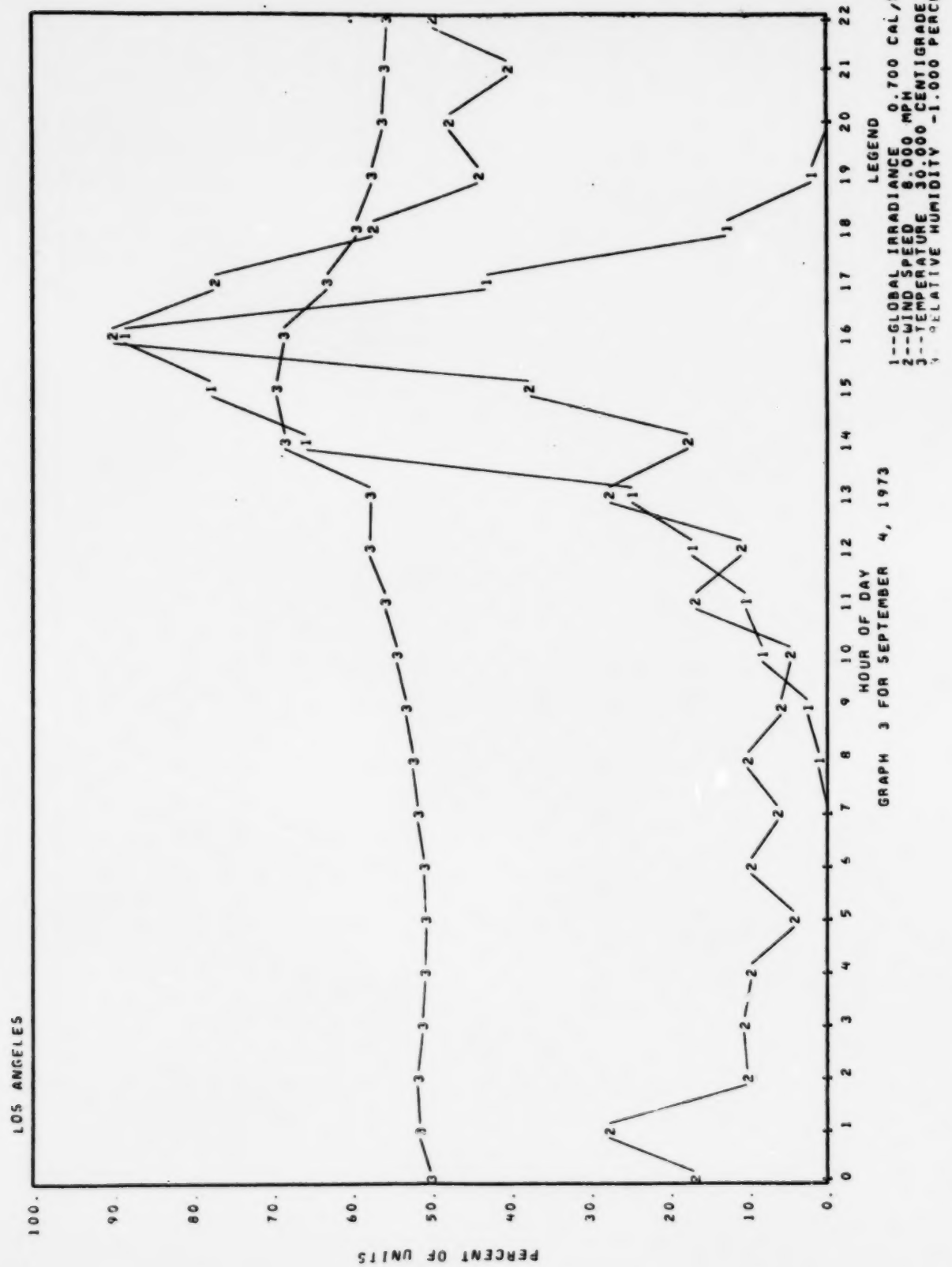

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 3, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.050 PPM
3--NITROGEN DIOXIDE 0.070 PPM
4--NITROGEN OXIDES 0.100 PPM

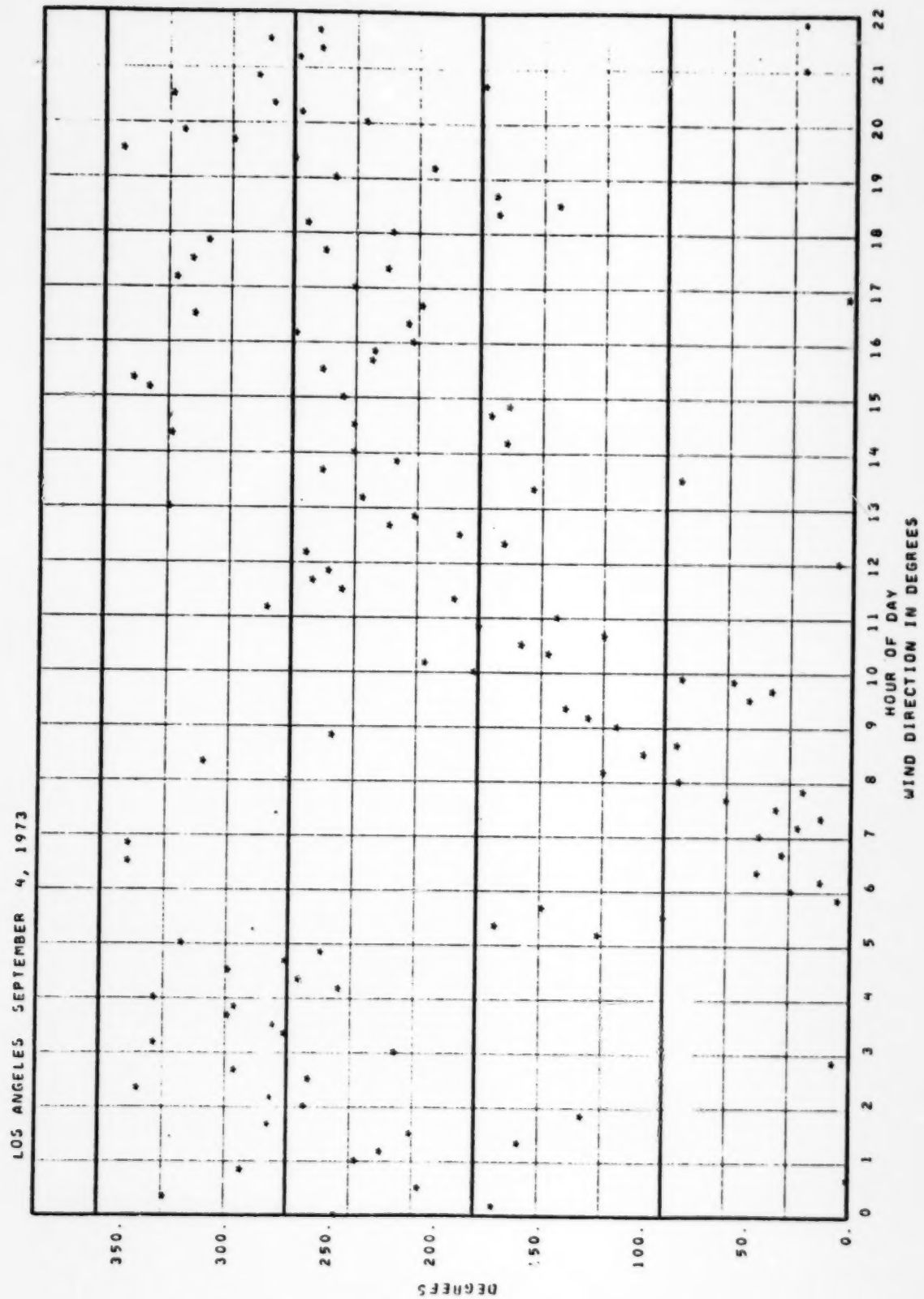

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 3, 1973
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MI
2--WIND SPEED 8.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY -1.000 PERCENT

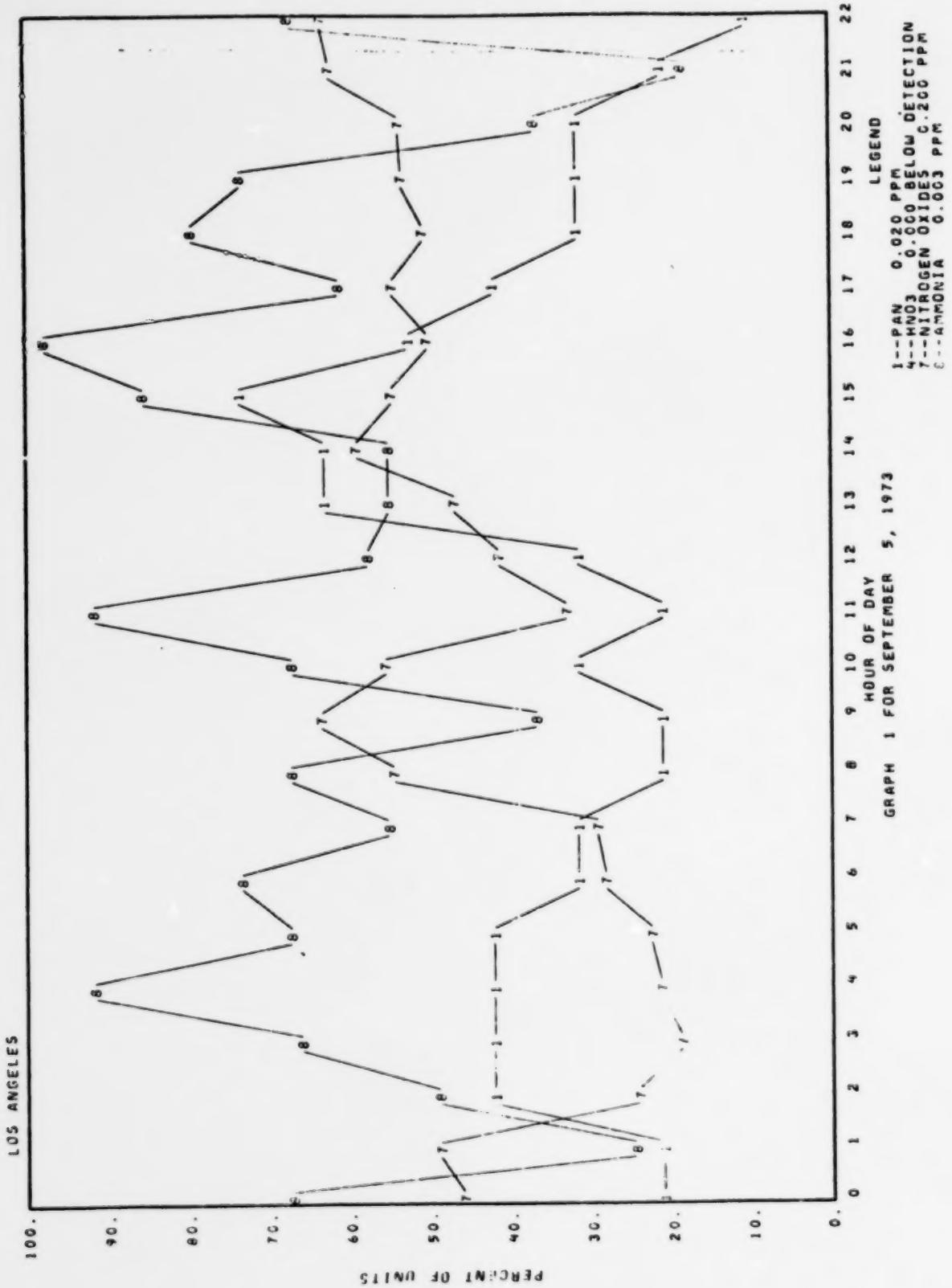

LOS ANGELES SEPTEMBER 3, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
DEGREES
0. 50. 100. 150. 200. 250. 300. 350.

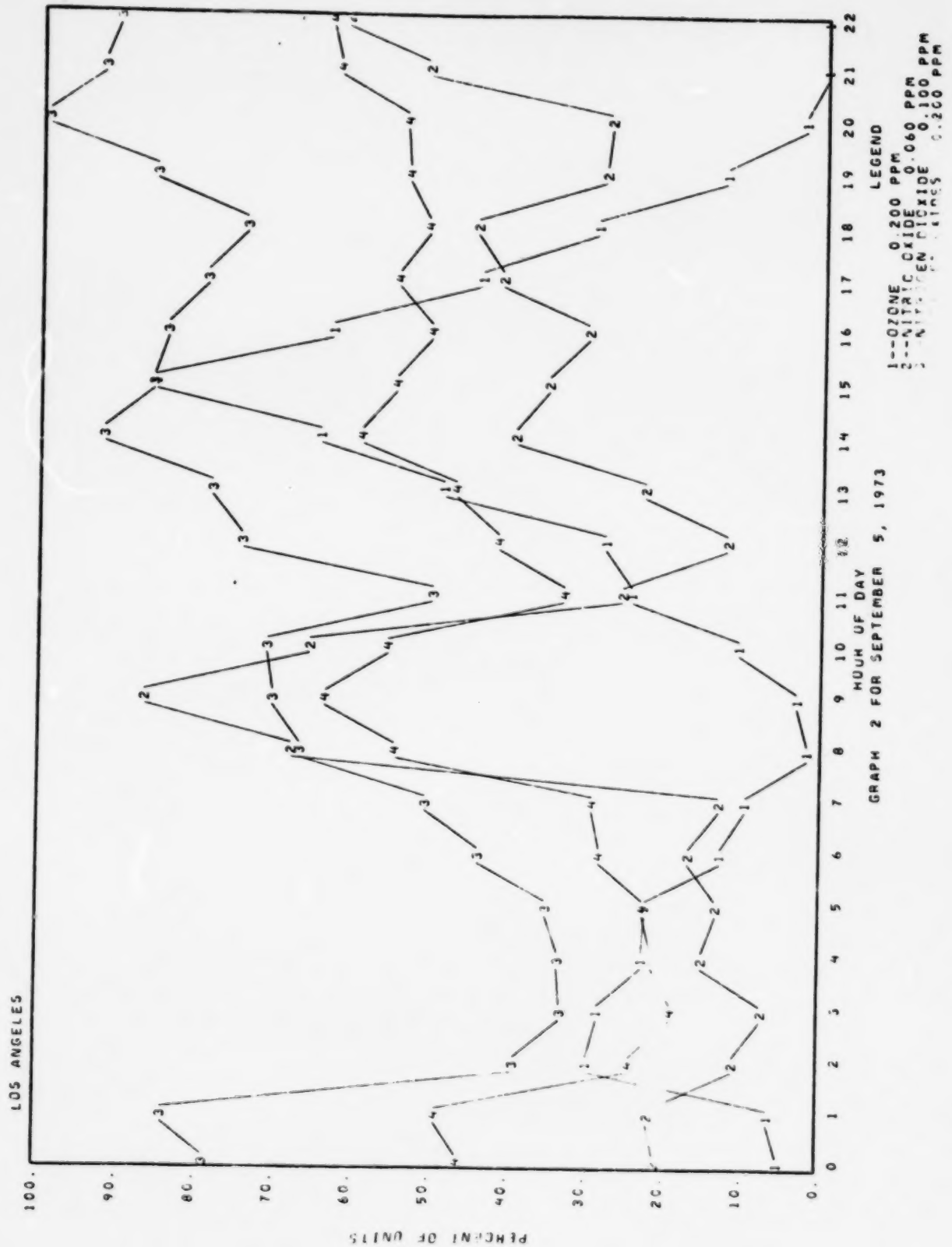

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 4, 1973
LEGEND
---PAN 0.007 PPM
---(NO3 0.006 PPM
---OXIDES 0.200 PPM
---0.003 PPM

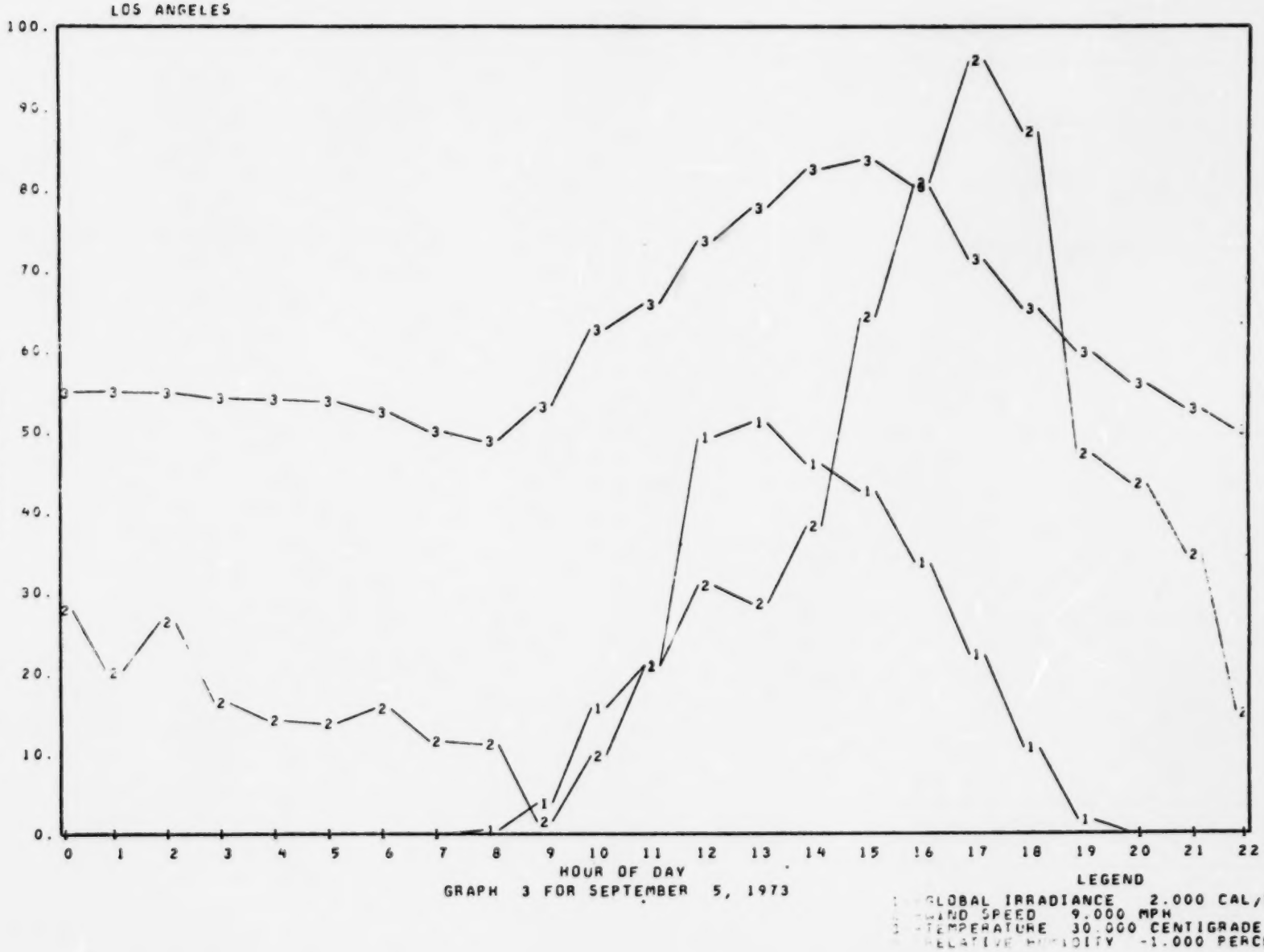

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 4, 1973
LEGEND
1--OZONE 0.090 PPM
2--NITRIC OXIDE 0.040 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.200 PPM

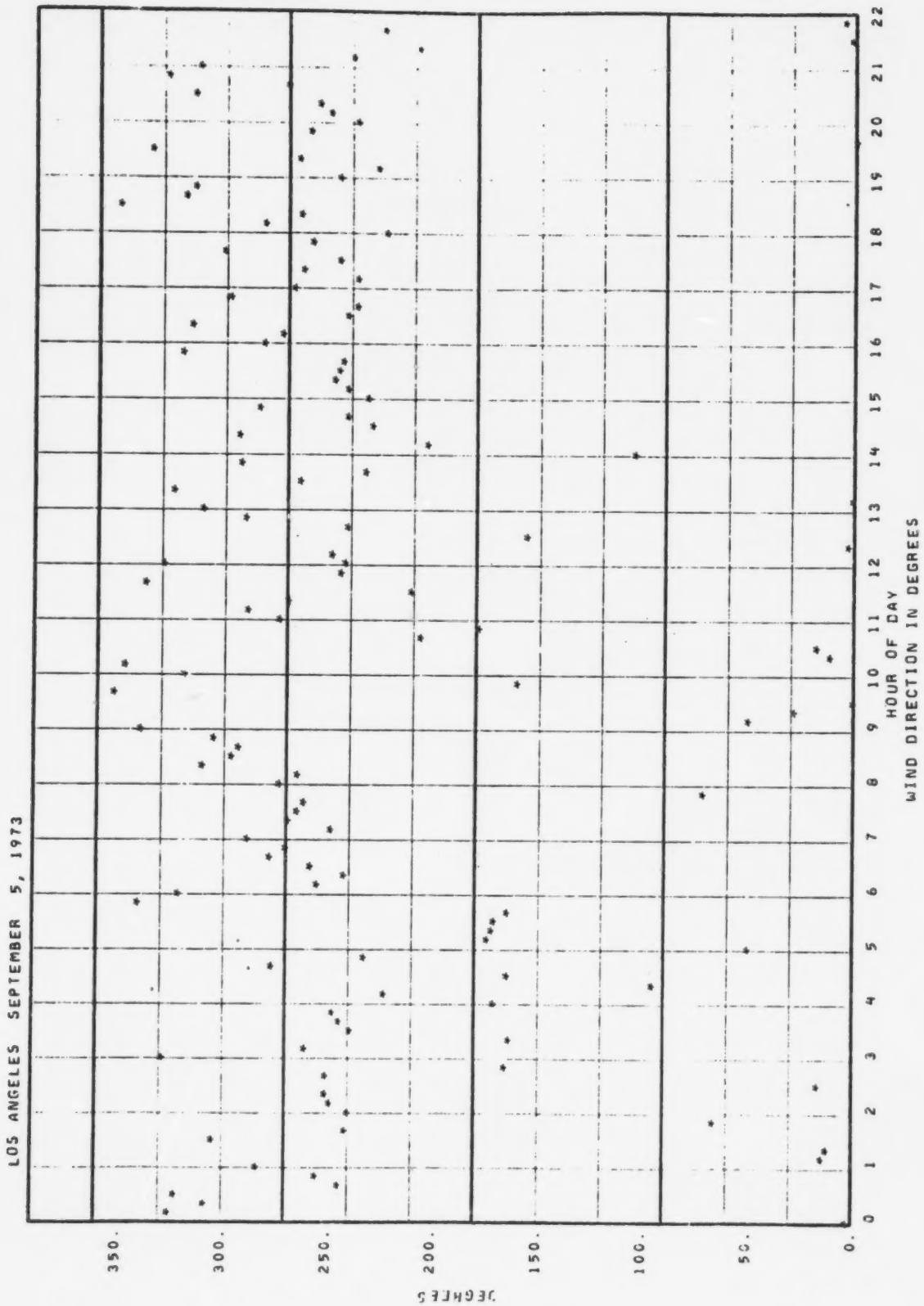

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 4, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.700 CAL/SQ.CM/MIN
2--WIND SPEED 8.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY -1.000 PERCENT

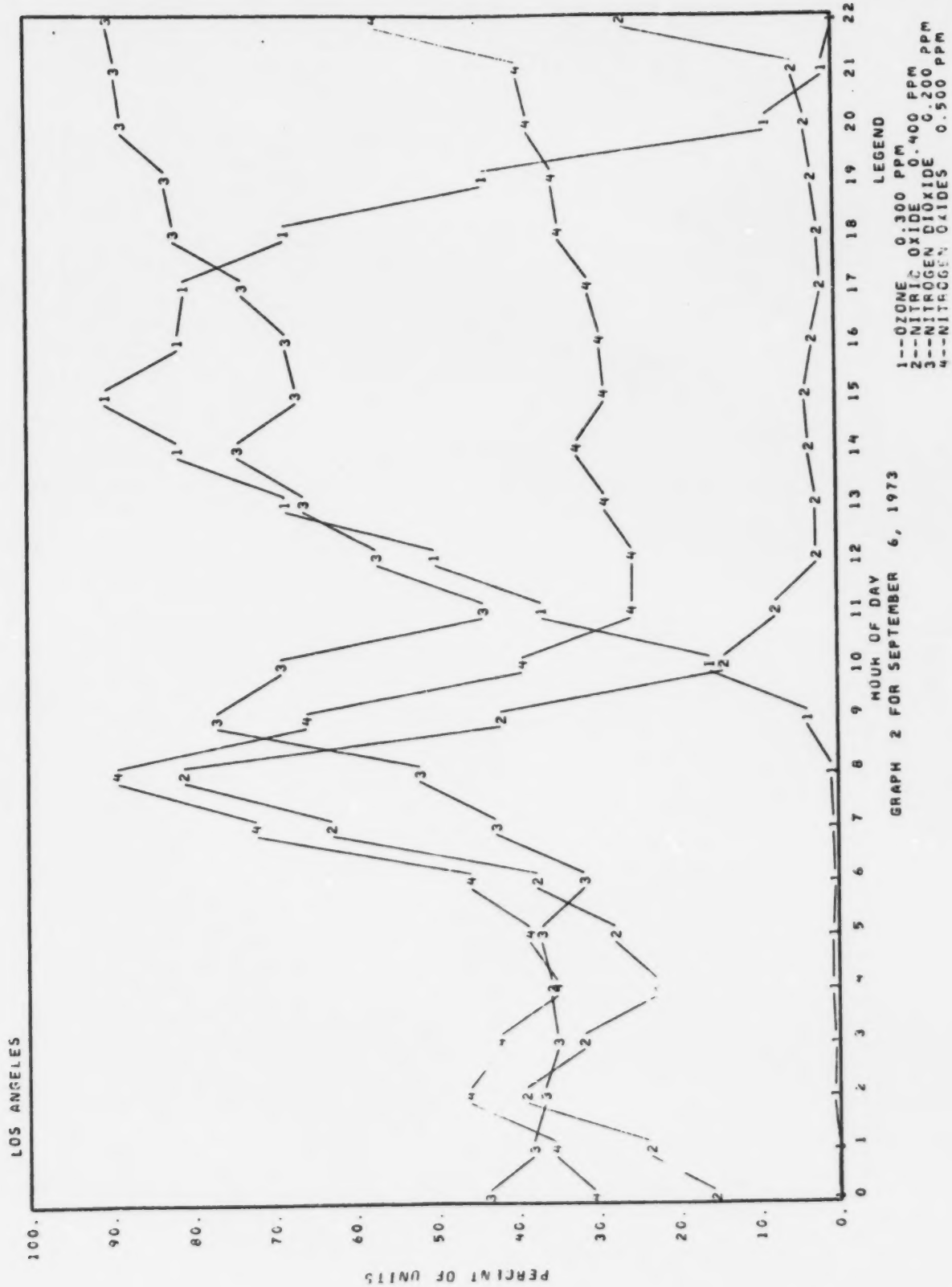

LOS ANGELES SEPTEMBER 4, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

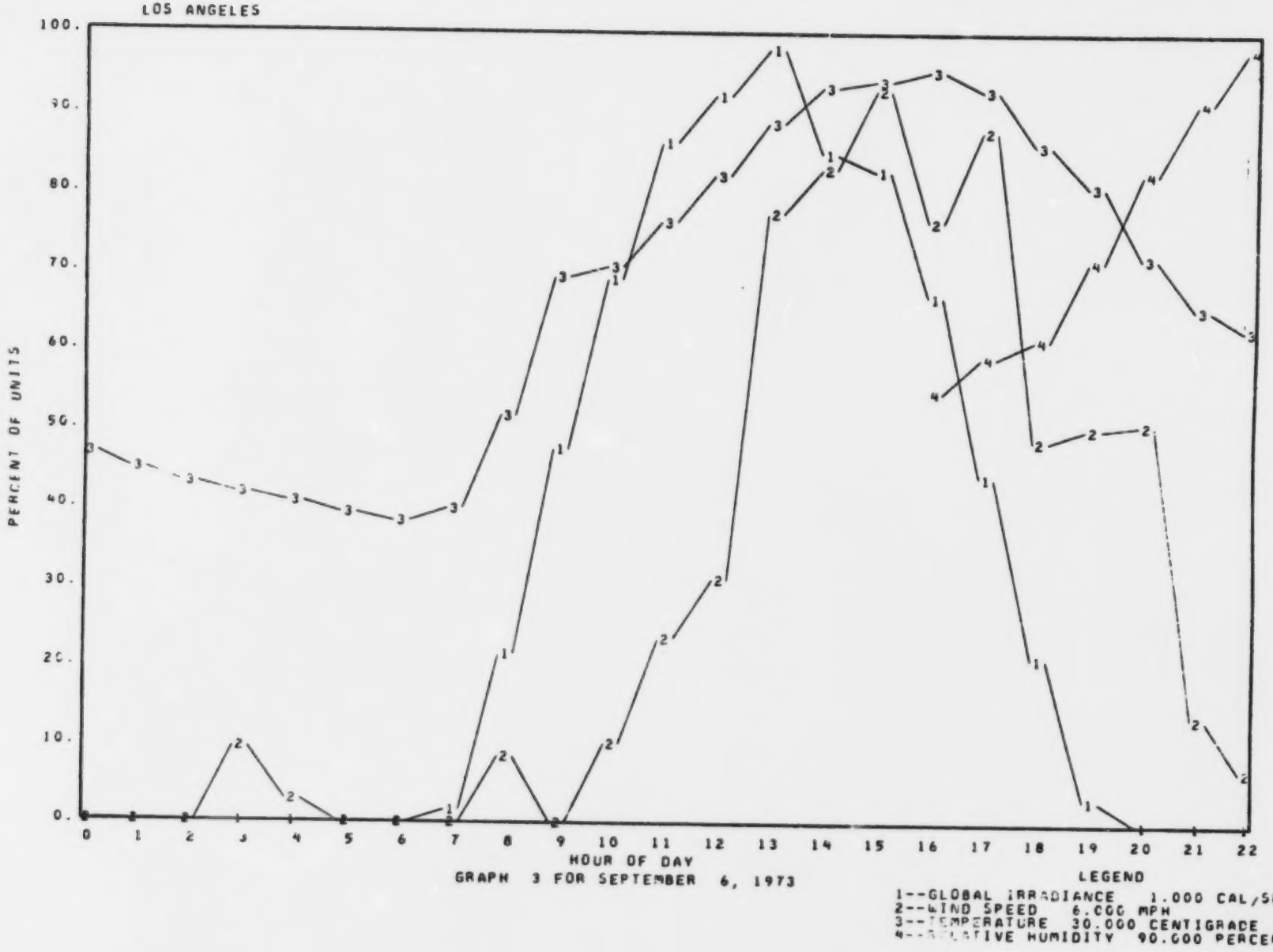

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 5, 1973
LEGEND
1--PAN 0.020 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.003 PPM

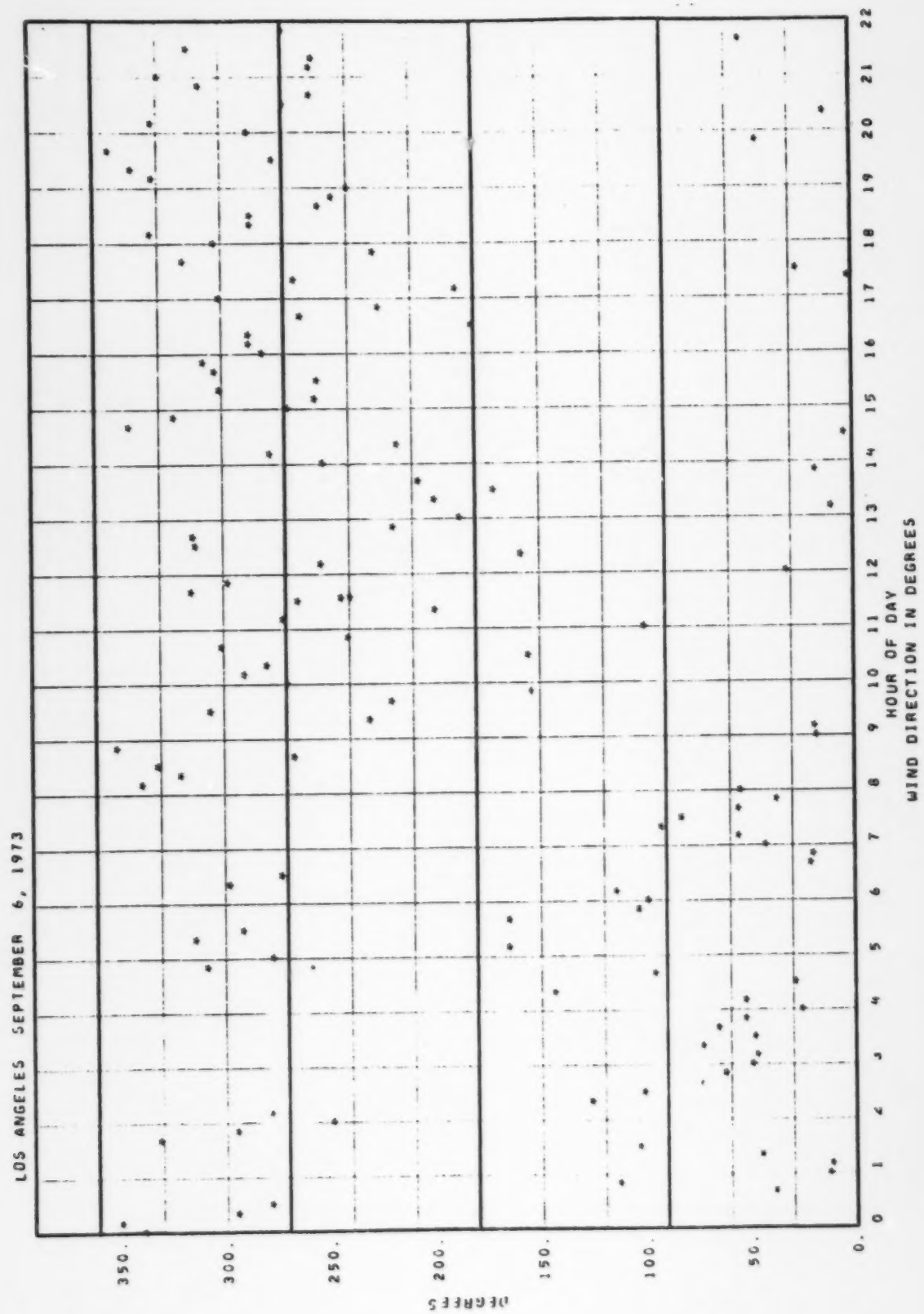

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 5, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.060 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--HYDROCARBONS 0.200 PPM

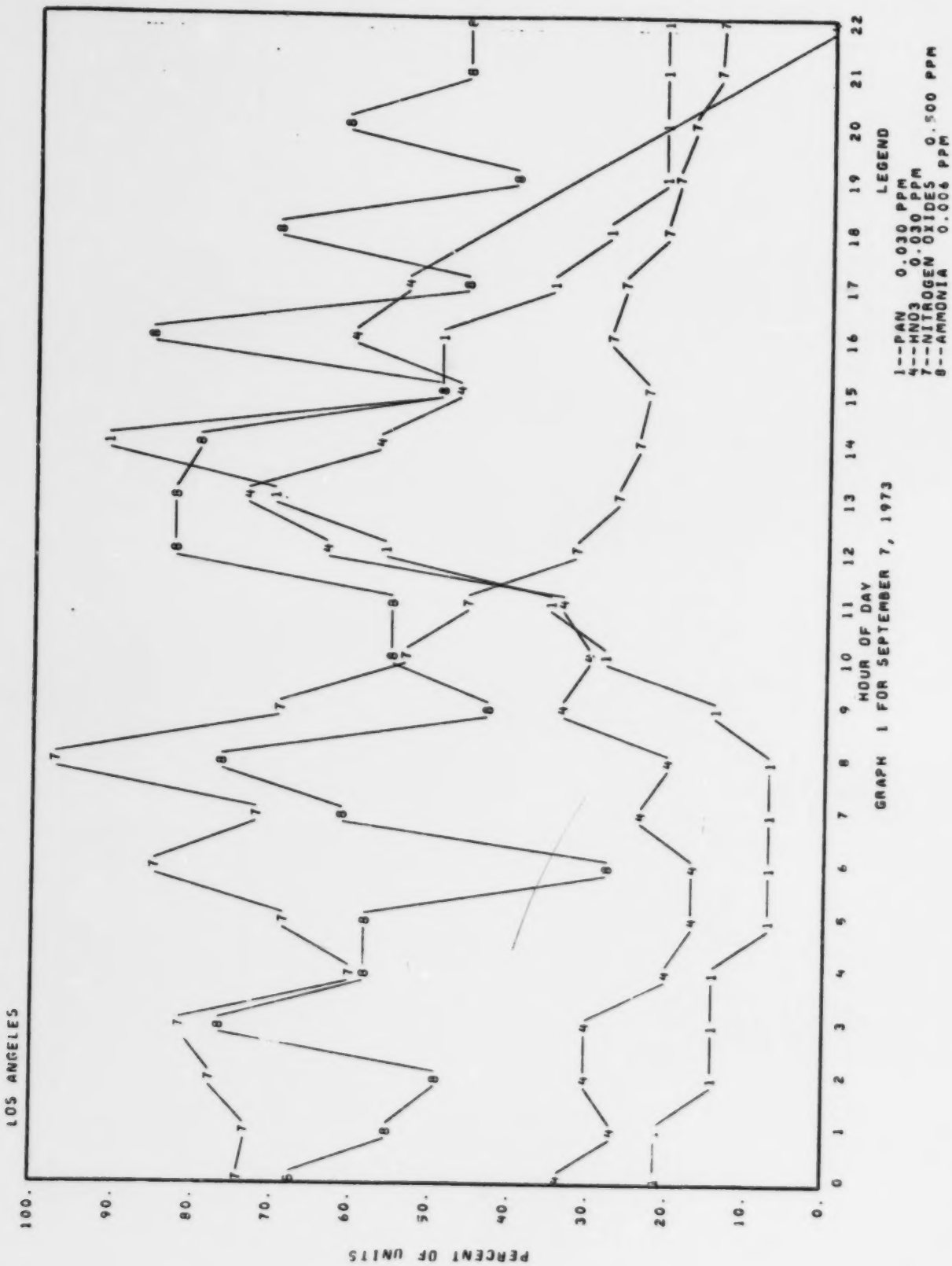

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UN IT
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 5, 1973
LEGEND
1 GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2 WIND SPEED 9.000 MPH
3 TEMPERATURE 30.000 CENTIGRADE
RELATIVE HUMIDITY -1.000 PERCENT

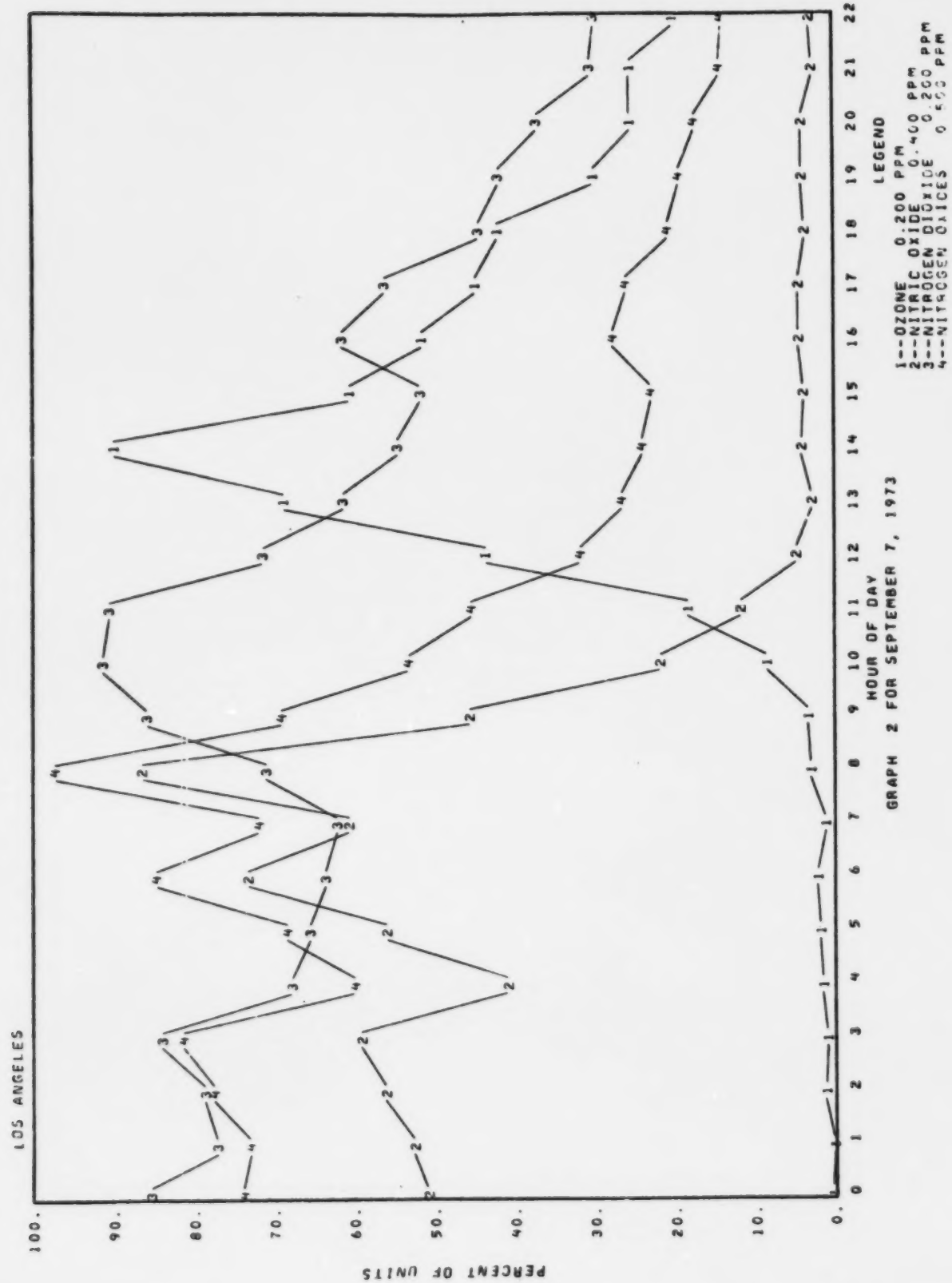

LOS ANGELES SEPTEMBER 5, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 6, 1973
LEGEND
1--OZONE 0.300 PPM
2--NITRIC OXIDE 0.400 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.500 PPM

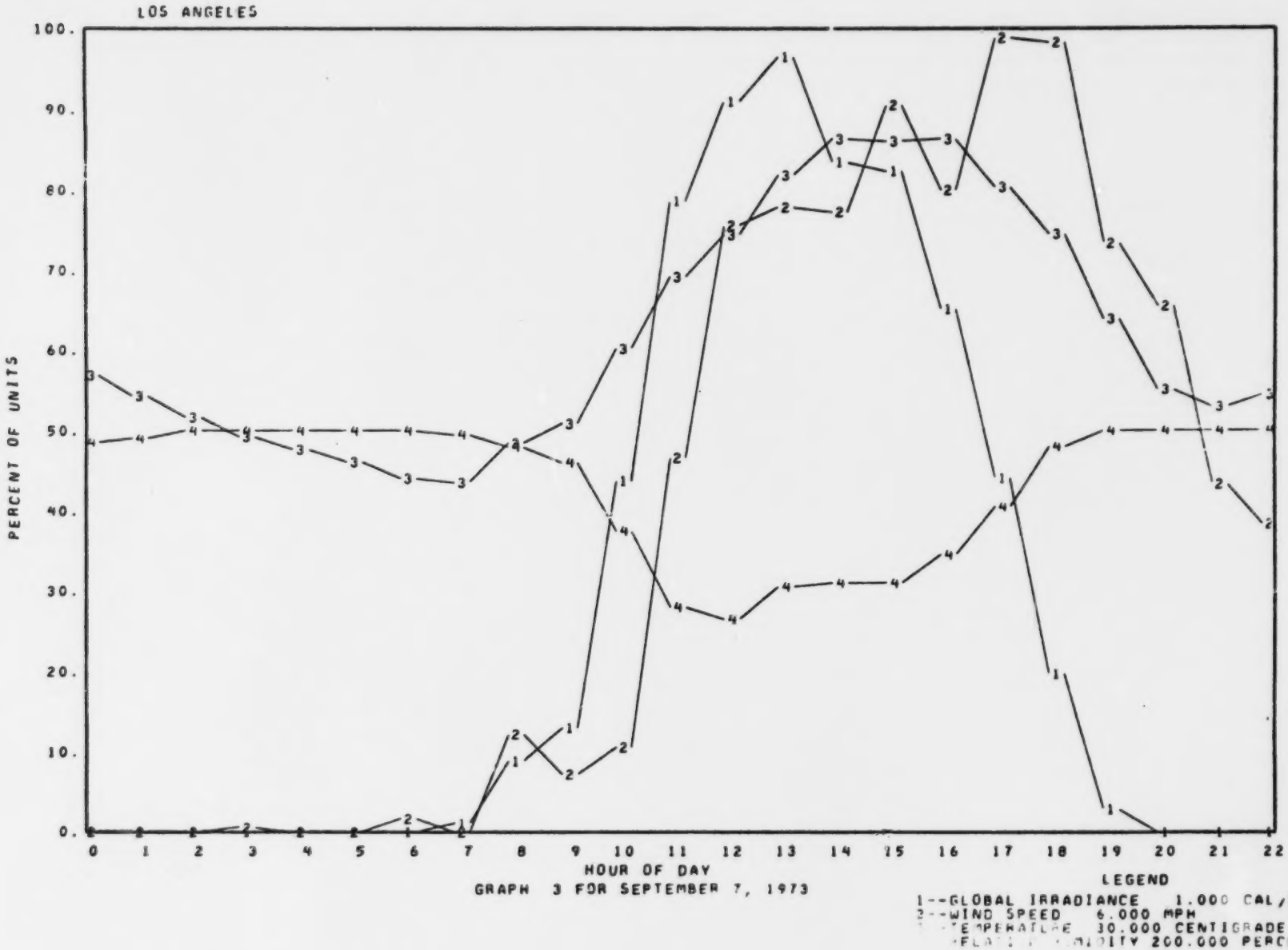

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 6, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/M
2--WIND SPEED 6.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 90.000 PERCENT

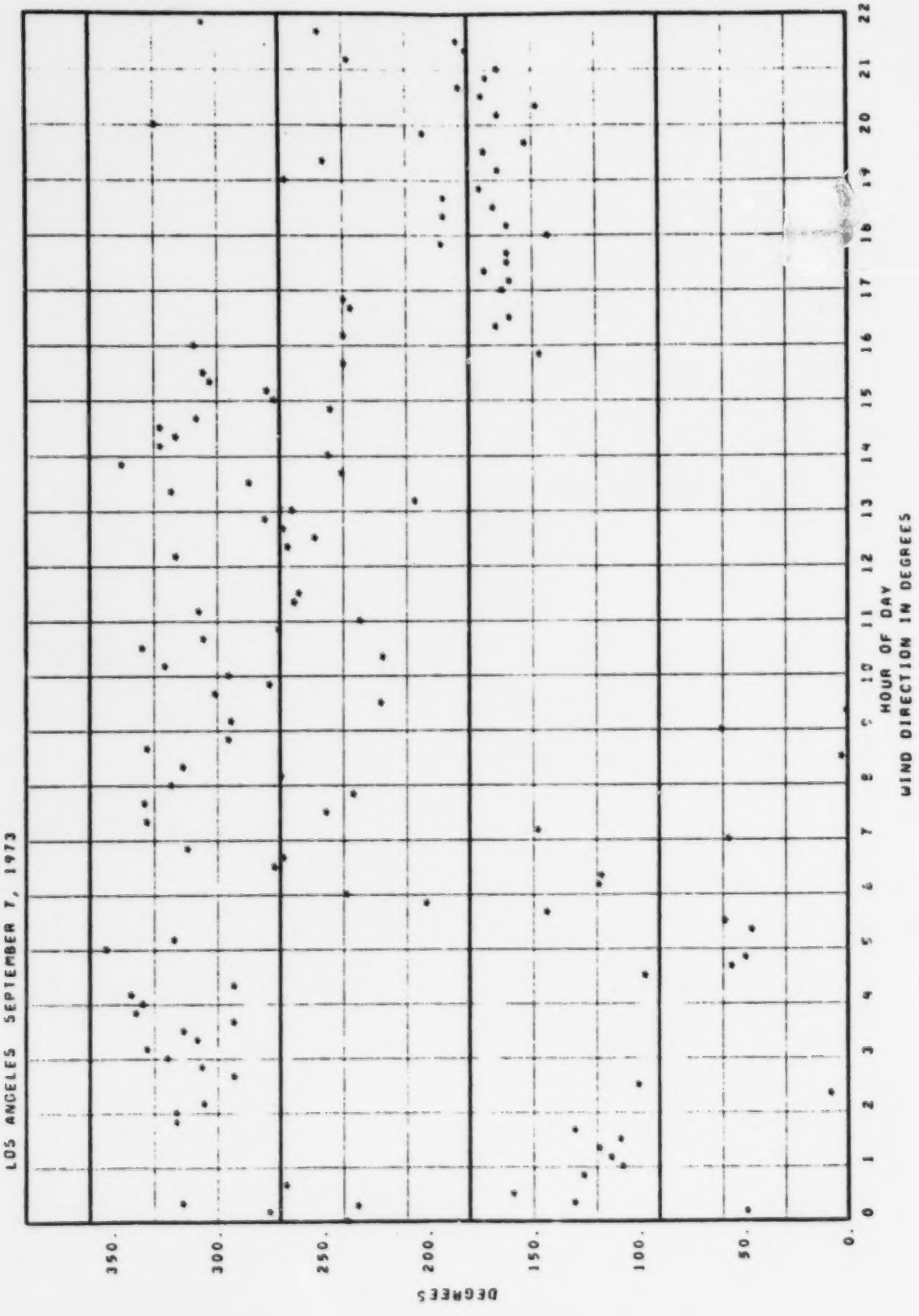

LOS ANGELES SEPTEMBER 6, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0 1 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
DEGREES
350. 300. 250. 200. 150. 100. 50. 0.

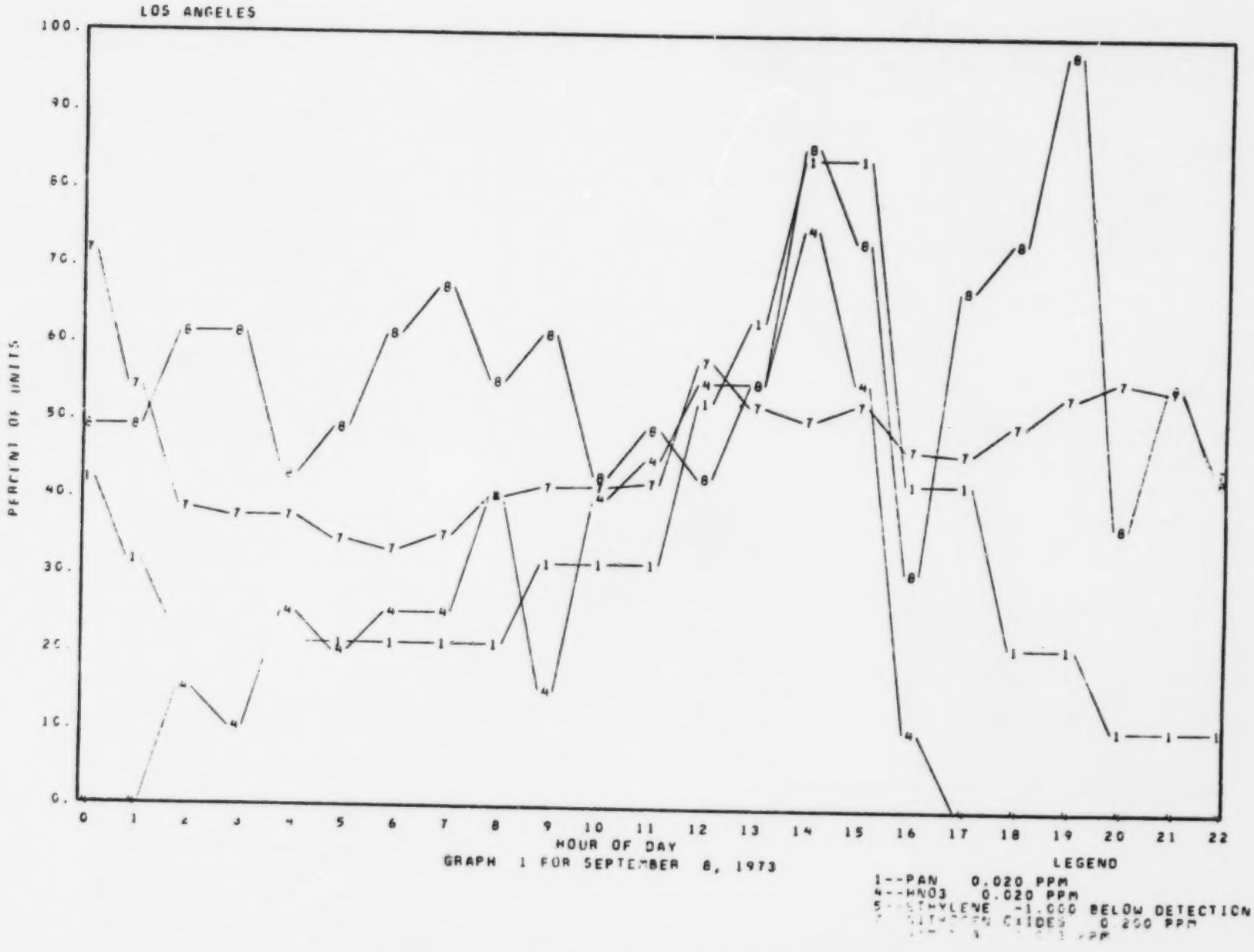

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 7, 1973
LEGEND
1--PAN 0.030 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.500 PPM
8--AMMONIA 0.006 PPM

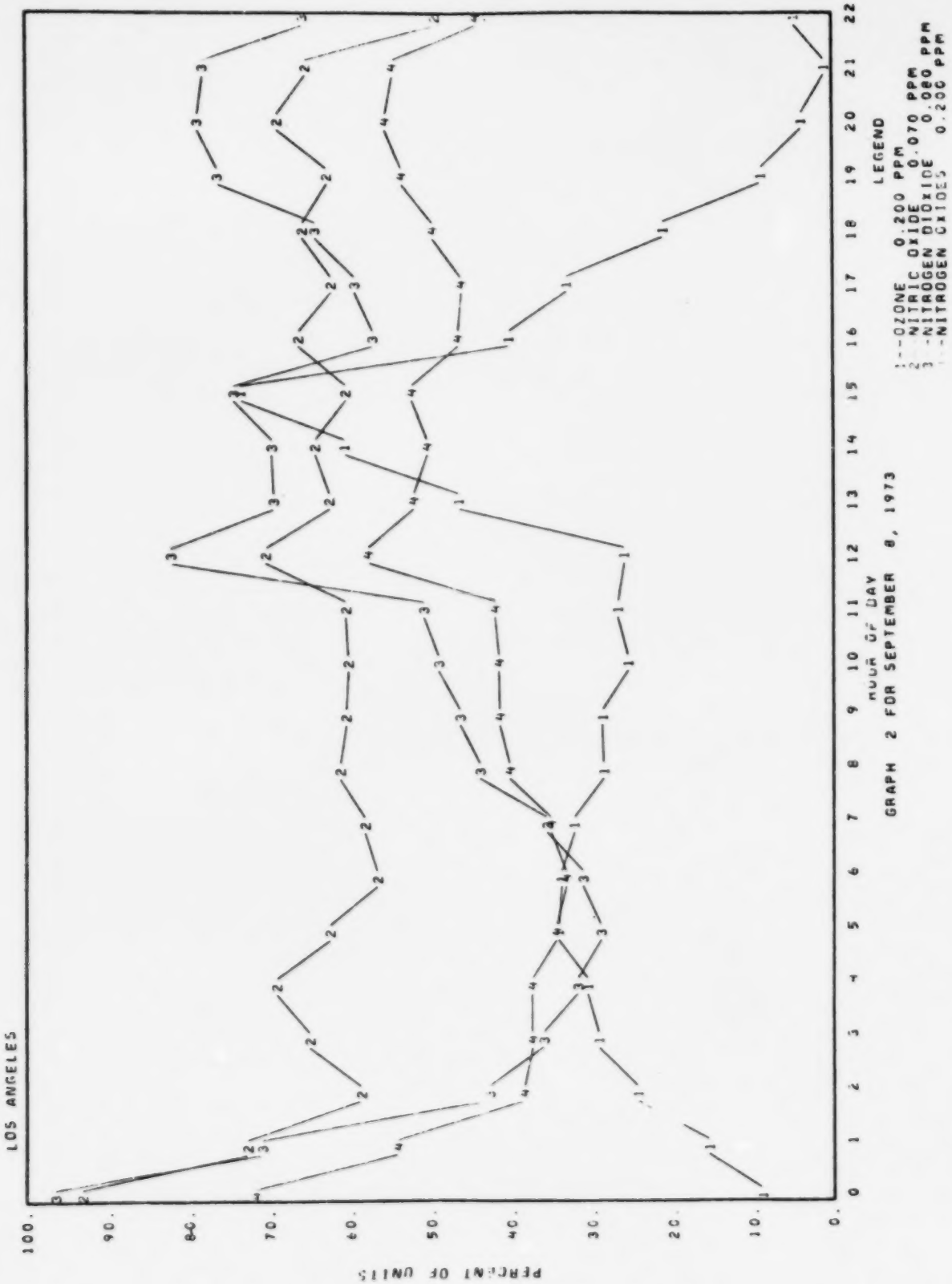


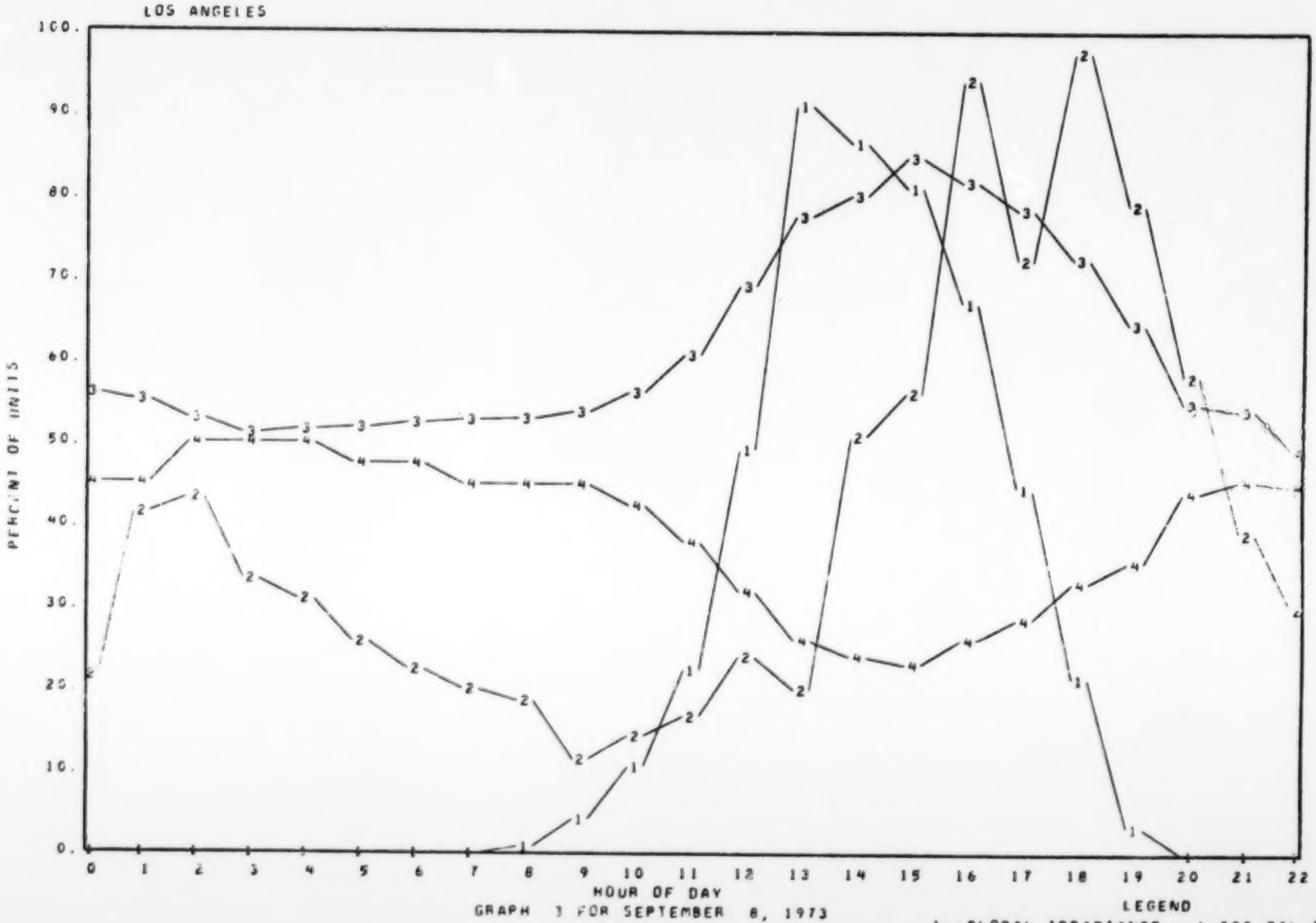
GRAPH 2 FOR SEPTEMBER 7, 1973

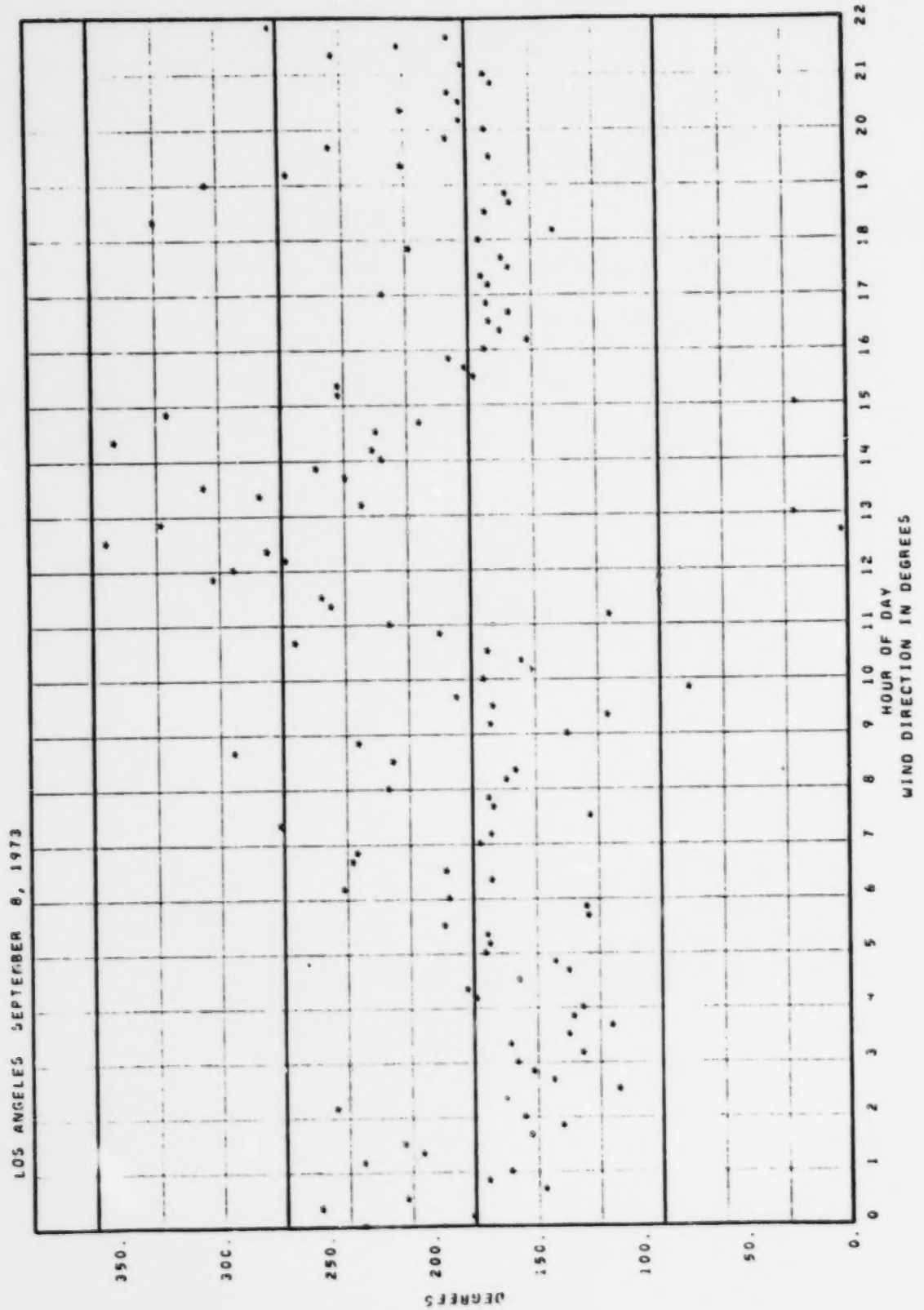

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 7, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MI
2--WIND SPEED 6.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

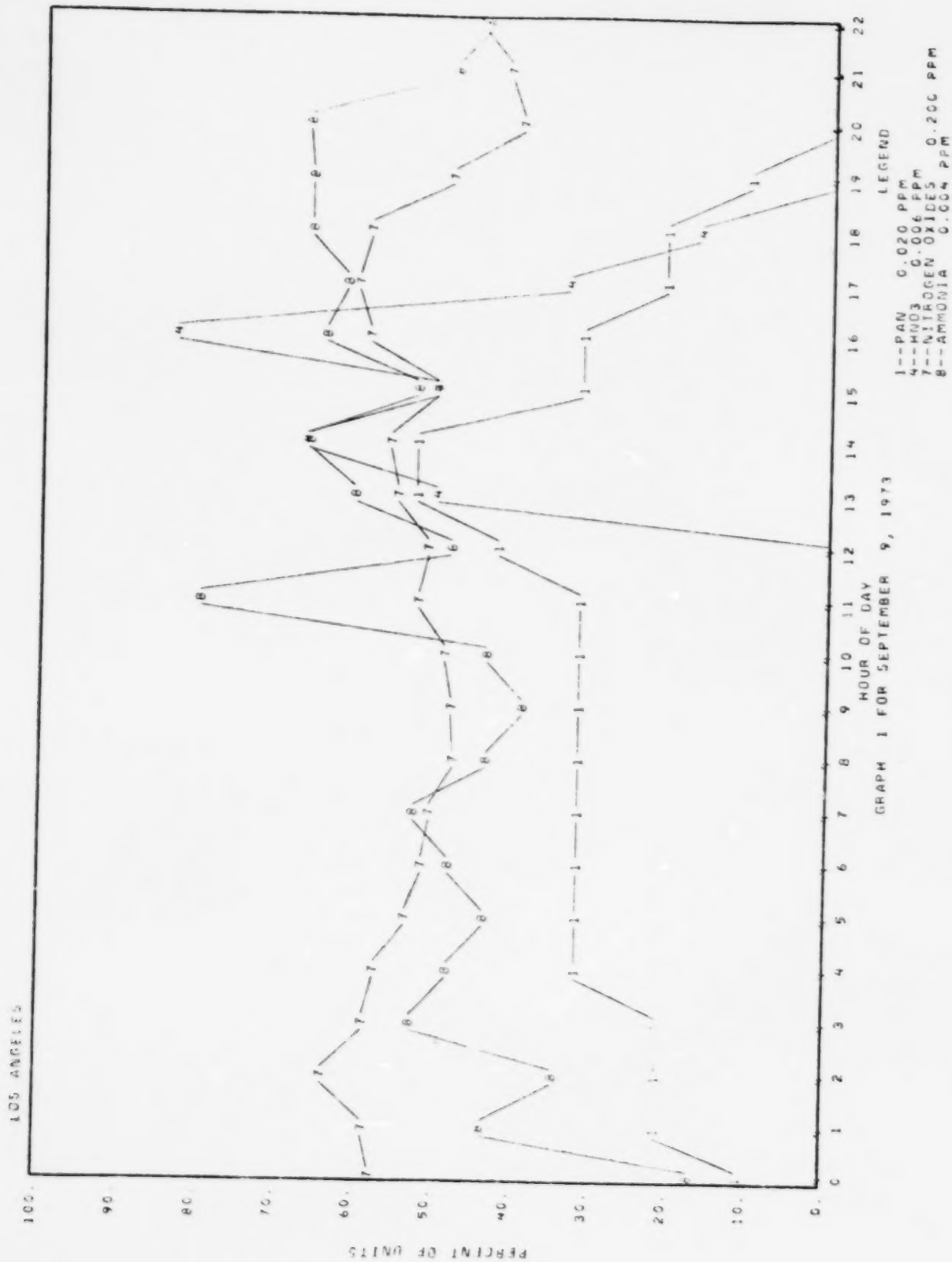

LOS ANGELES SEPTEMBER 7, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

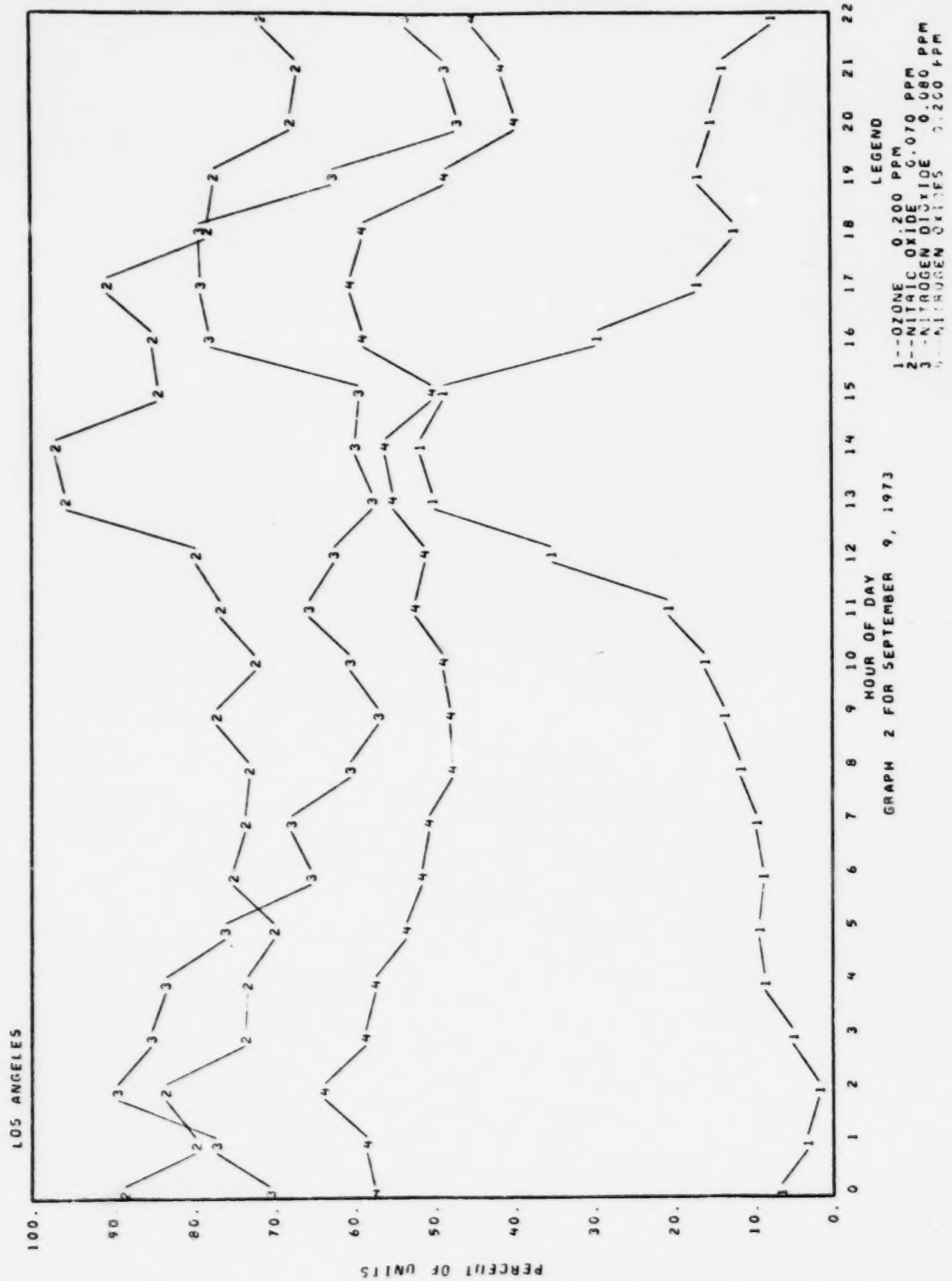

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 8, 1973
LEGEND
1--PAN 0.020 PPM
4--HNO3 0.020 PPM
5--ETHYLENE -1.000 BELOW DETECTION
NITROGEN OXIDES 0.200 PPM

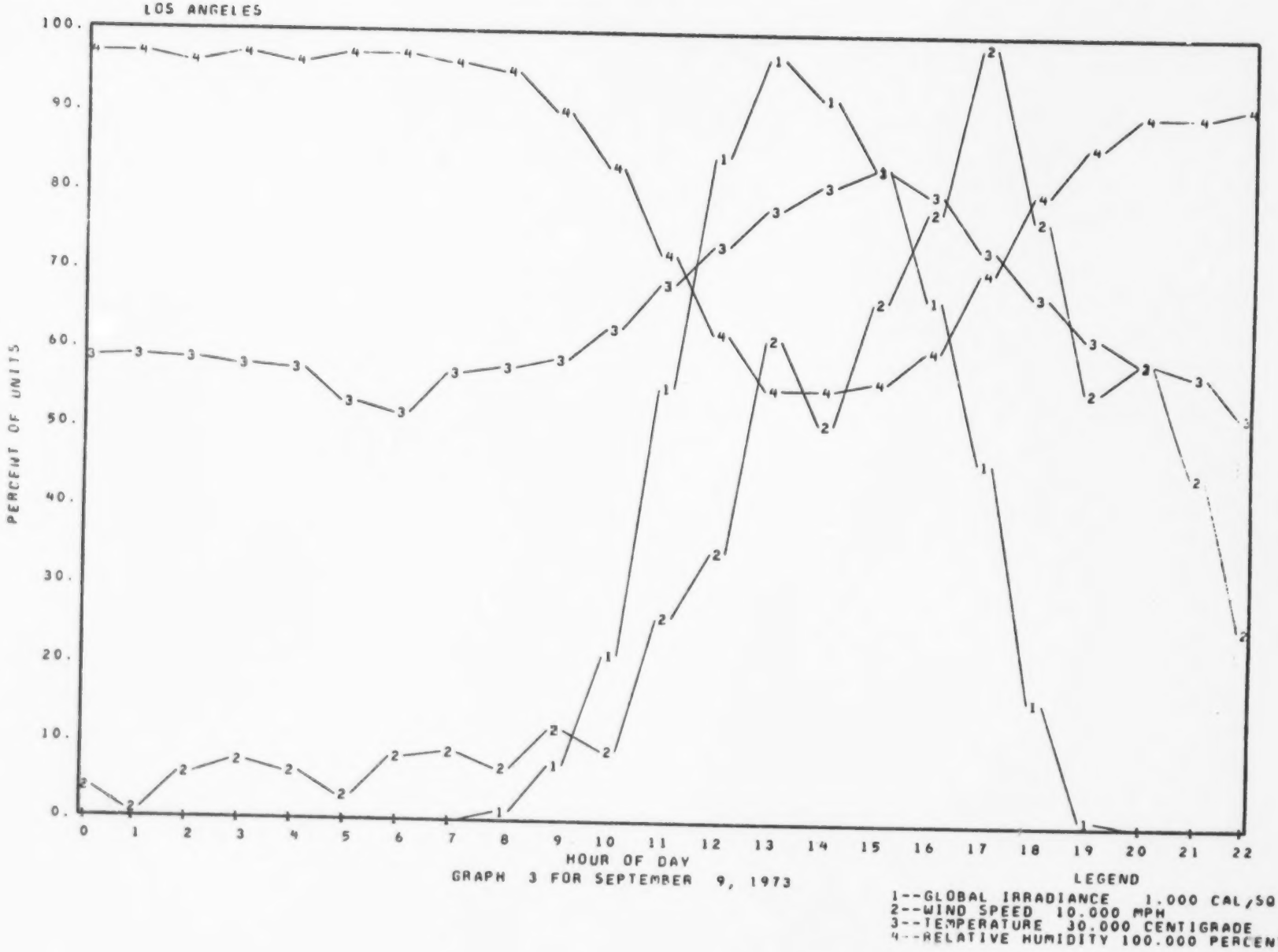

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 8, 1973
LEGEND
1 --OZONE 0.200 PPM
2 --NITRIC OXIDE 0.070 PPM
3 --NITROGEN DIOXIDE 0.080 PPM
4 --NITROGEN OXIDES 0.200 PPM

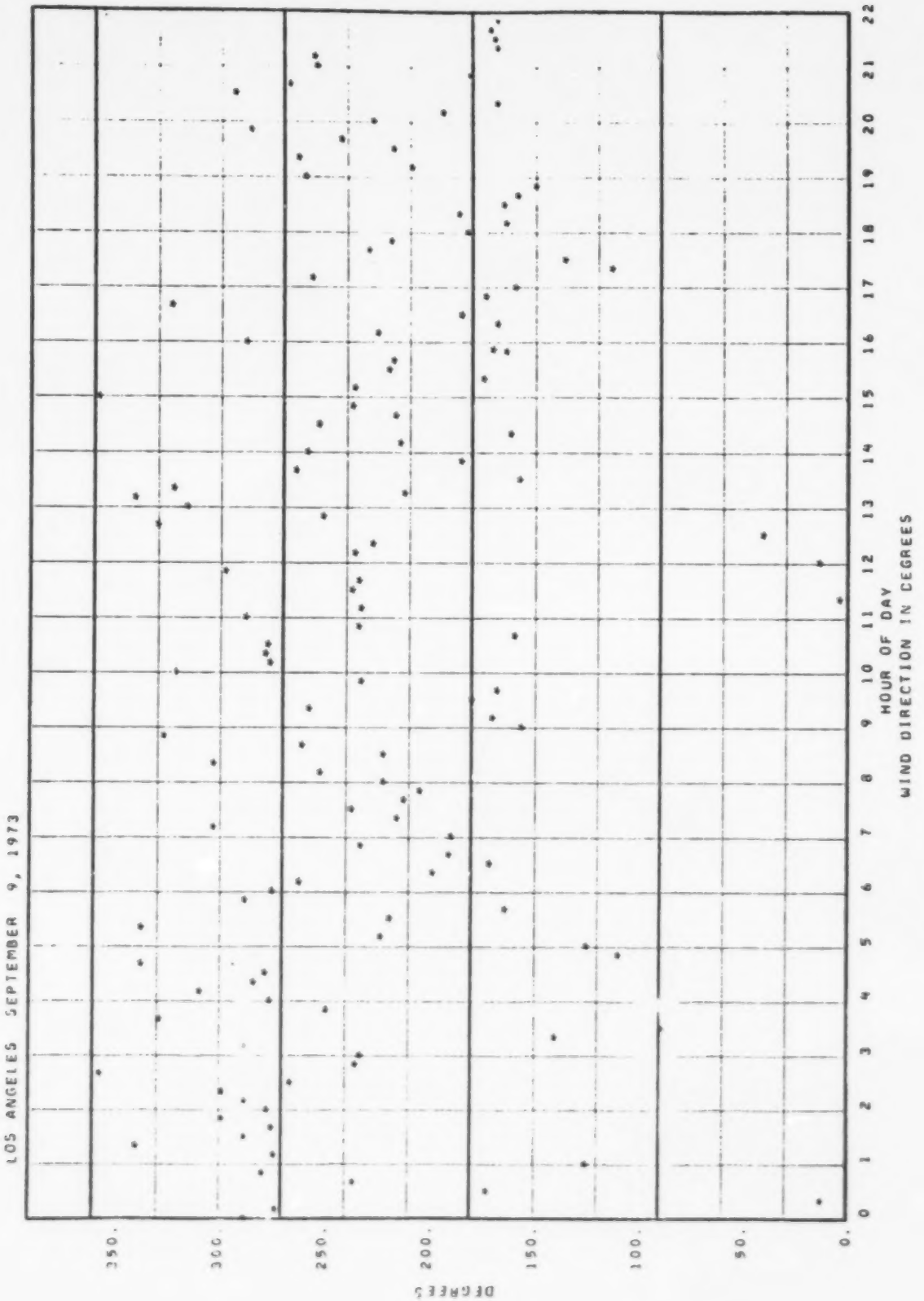

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 8, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MI
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMICITY 200.000 PERCENT

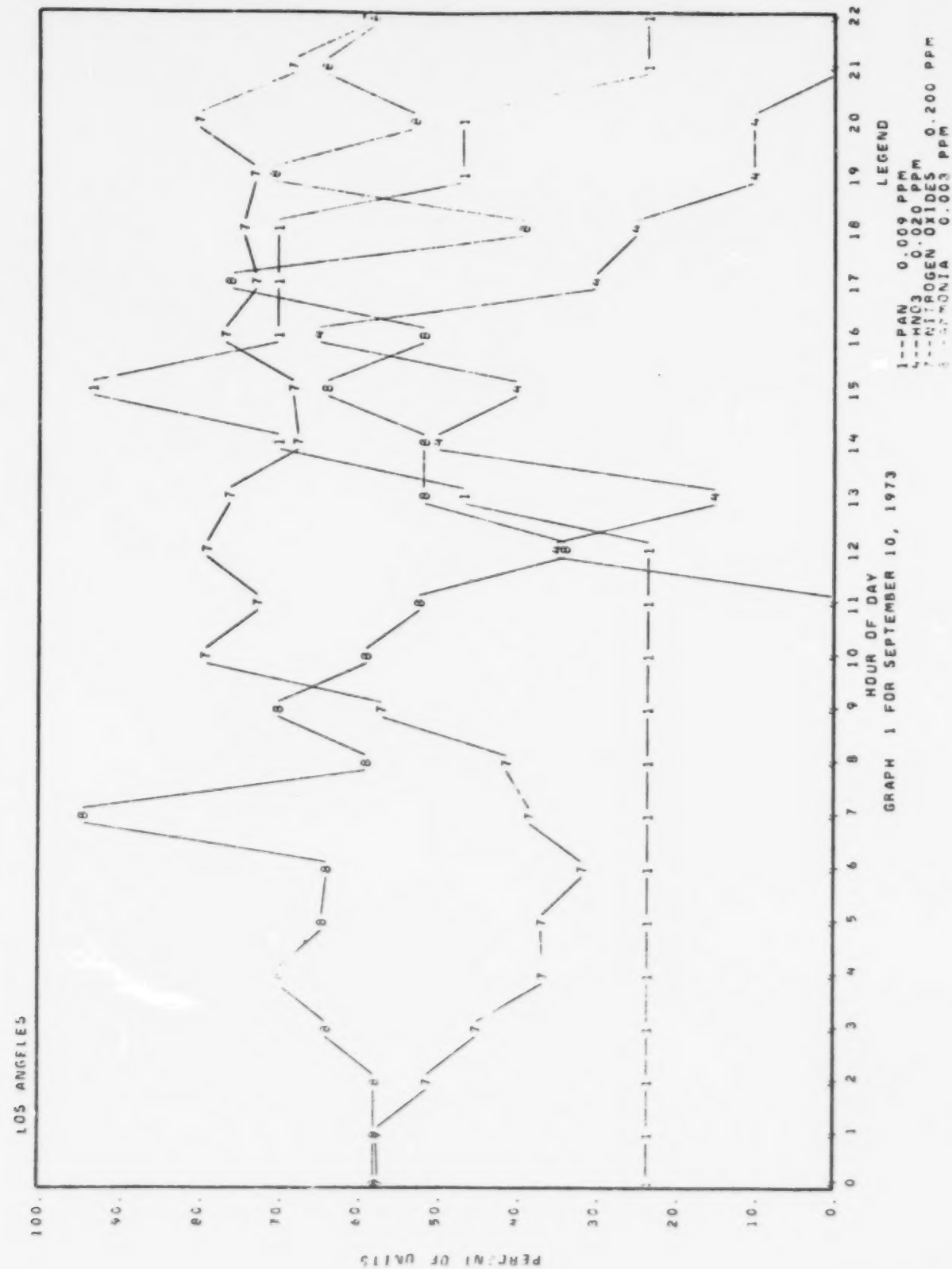

LOS ANGELES SEPTEMBER 8, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

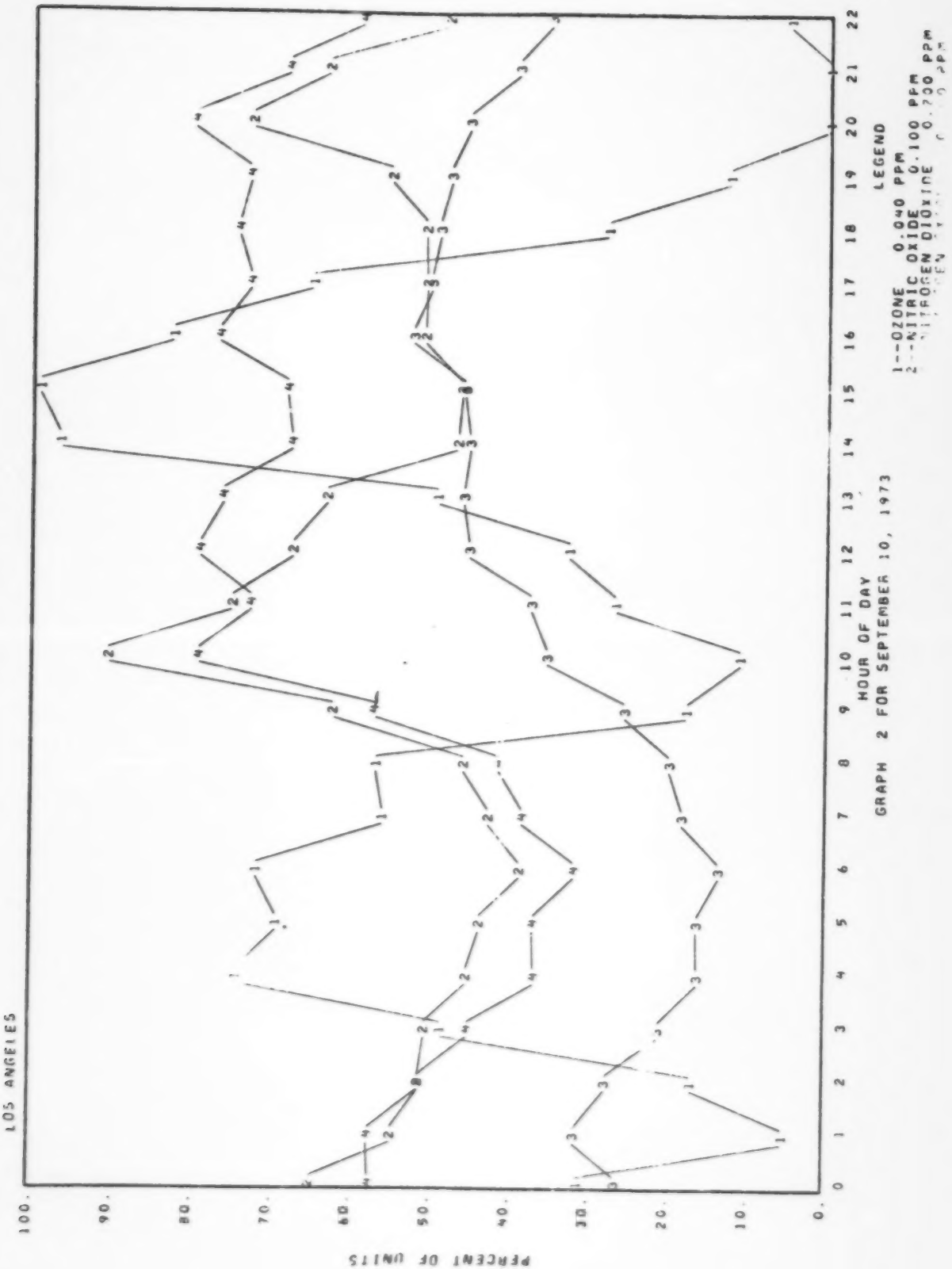

LOS ANGELES
PERCENT OF UNITS
100.
90
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 9, 1973
LEGEND
1--PAN 0.020 PPM
4--HNO3 0.006 PPM
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.004 PPM


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 9, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.070 PPM
3--NITROGEN DIOXIDE 0.080 PPM
4--NITROGEN OXIDES 0.200 PPM

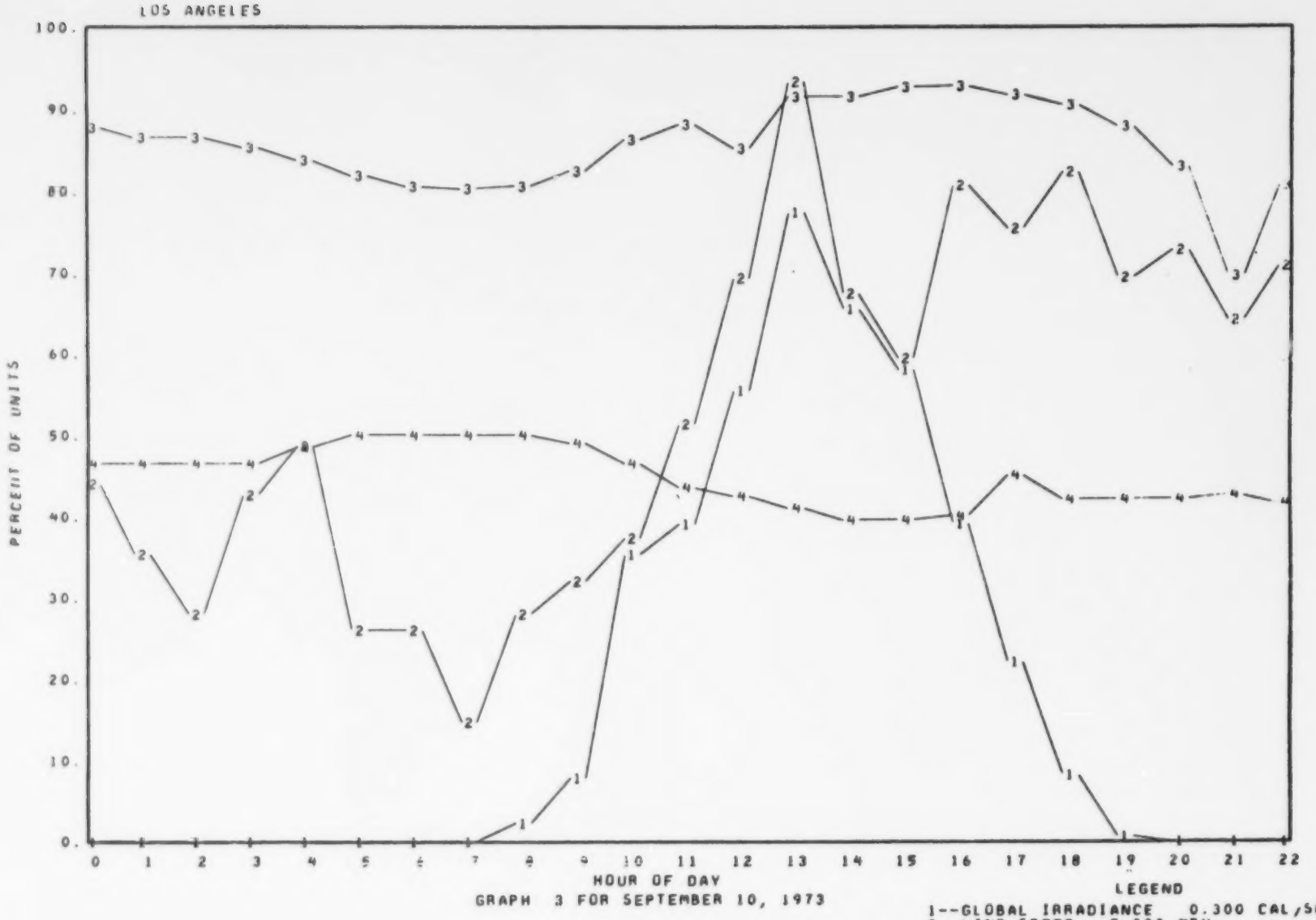

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 9, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/
2--WIND SPEED 10.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 100.000 PERCENT


LOS ANGELES SEPTEMBER 9, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 10, 1973
LEGEND
1--PAN 0.009 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.003 PPM



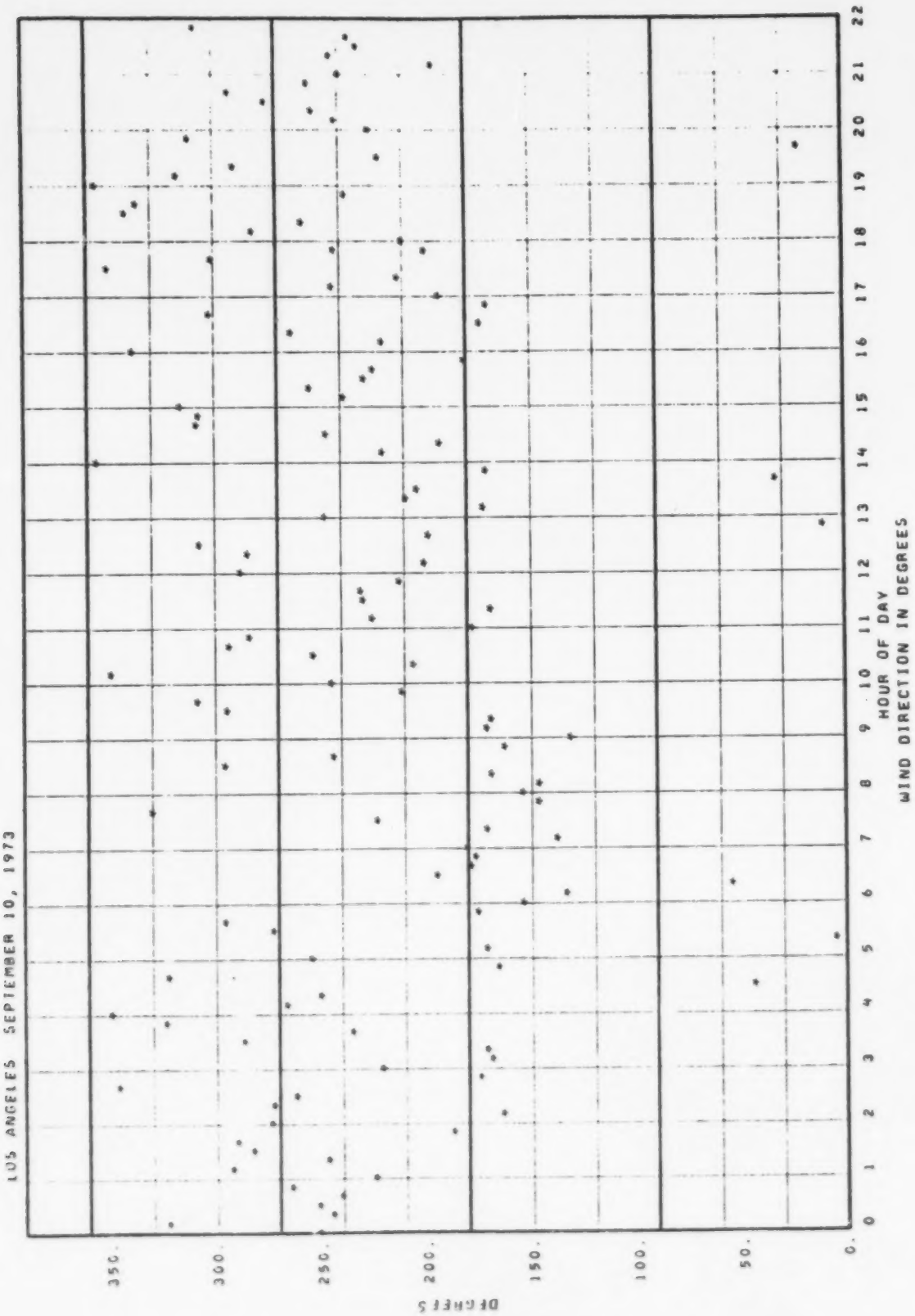
GRAPH 2 FOR SEPTEMBER 10, 1973

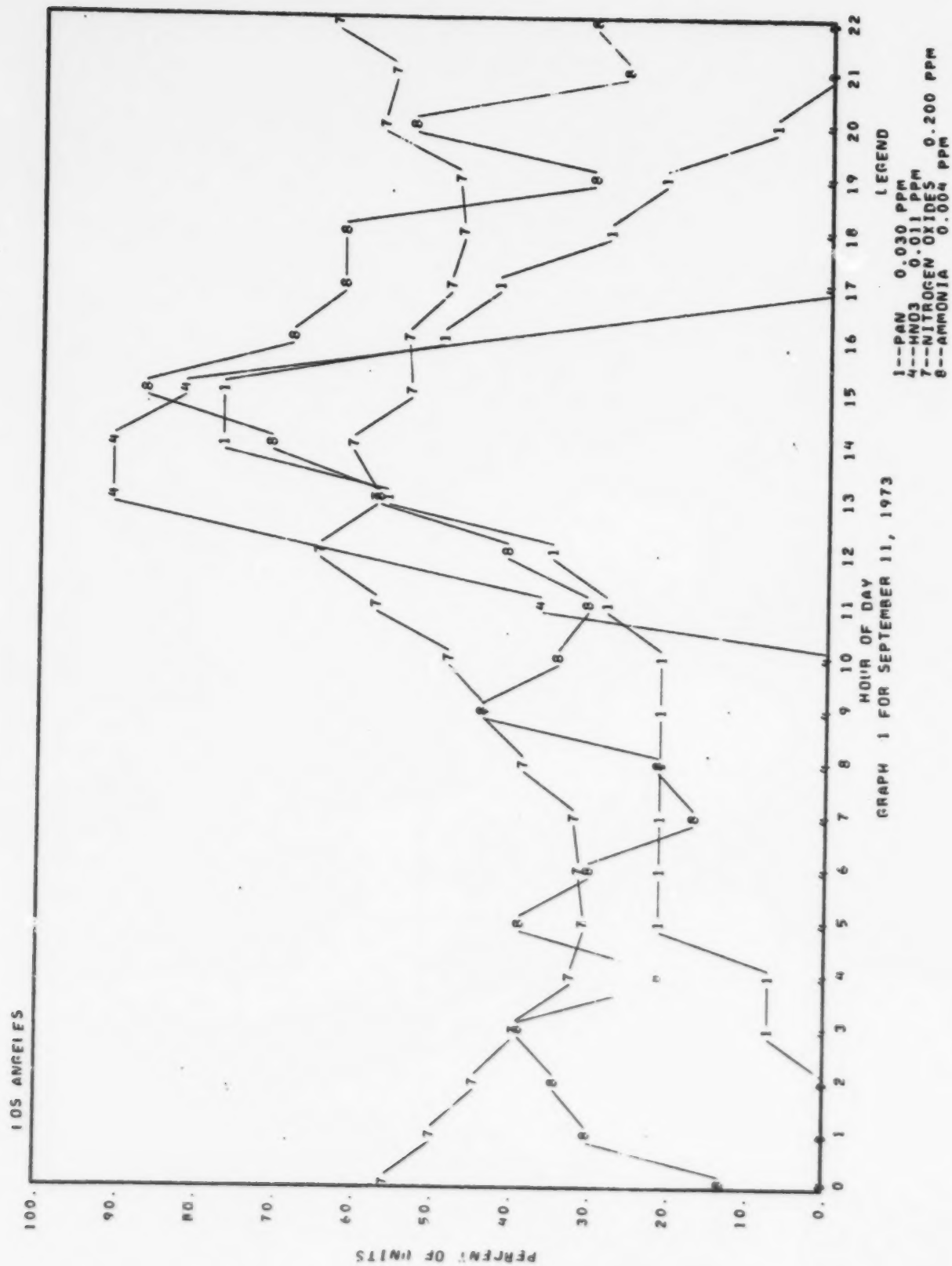


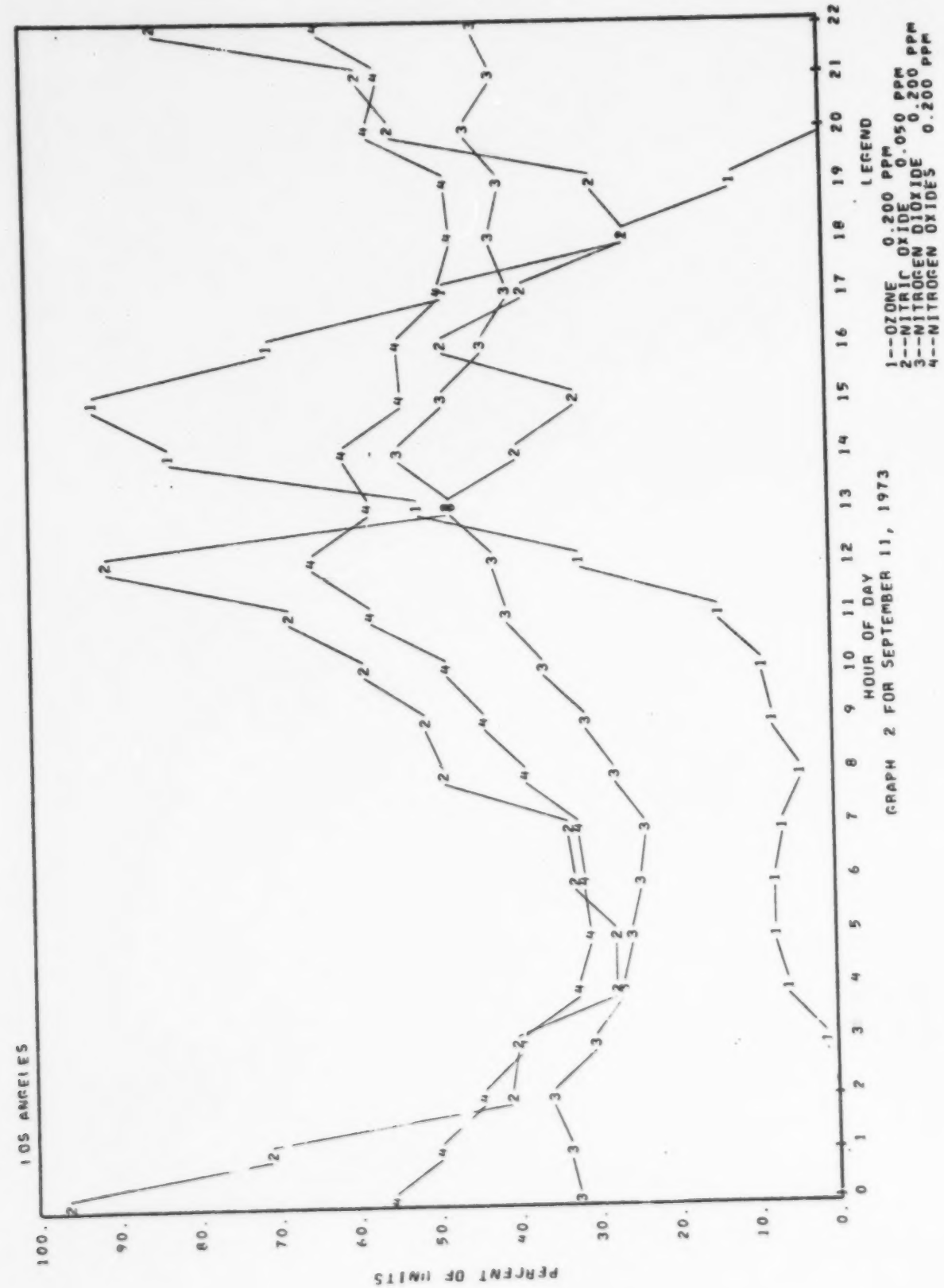
GRAPH 3 FOR SEPTEMBER 10, 1973

LEGEND

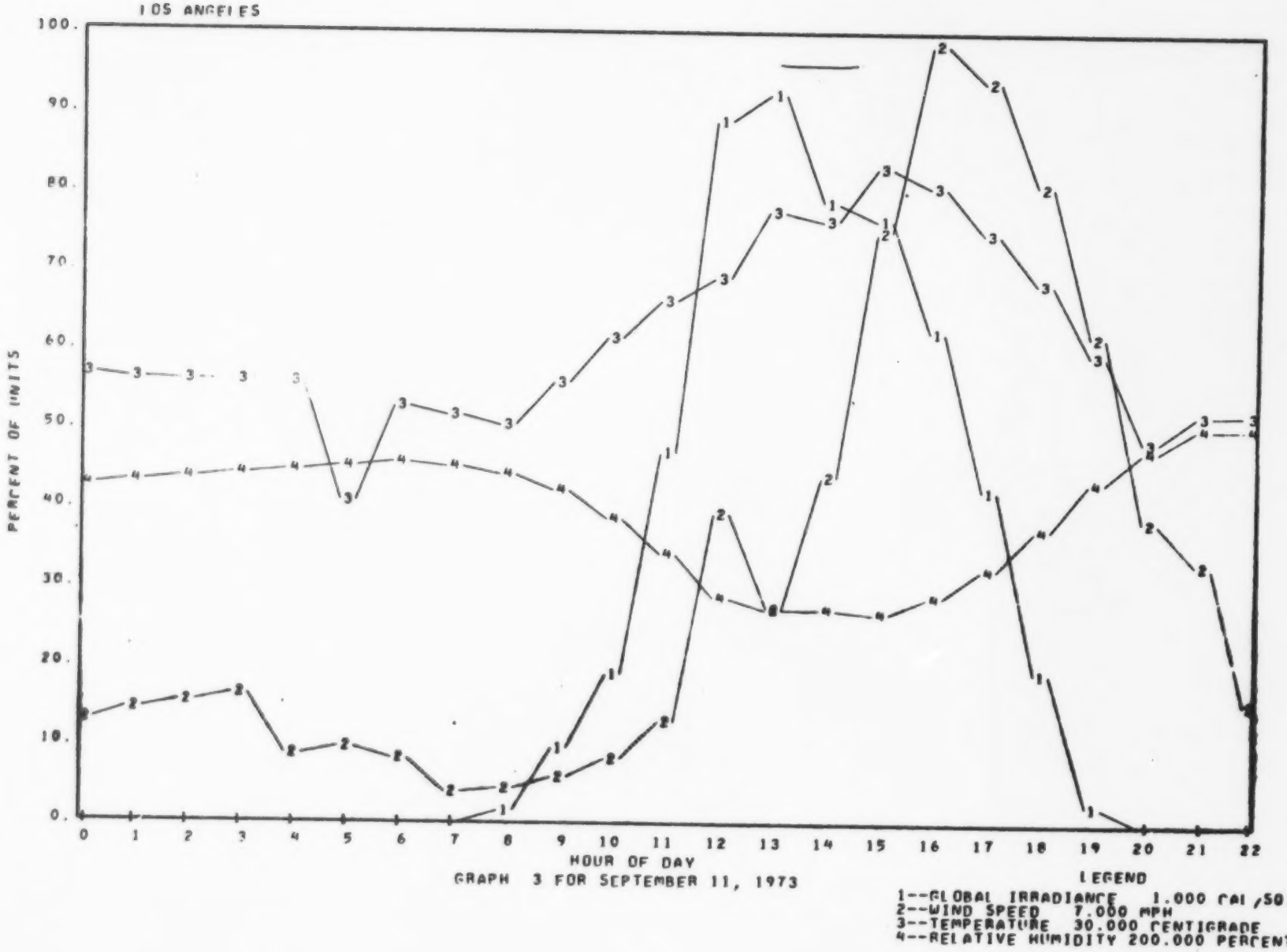
1--GLOBAL IRRADIANCE 0.300 CAL/SQ.CM/M
2--WIND SPEED 5.000 MPH
3--TEMPERATURE 20.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

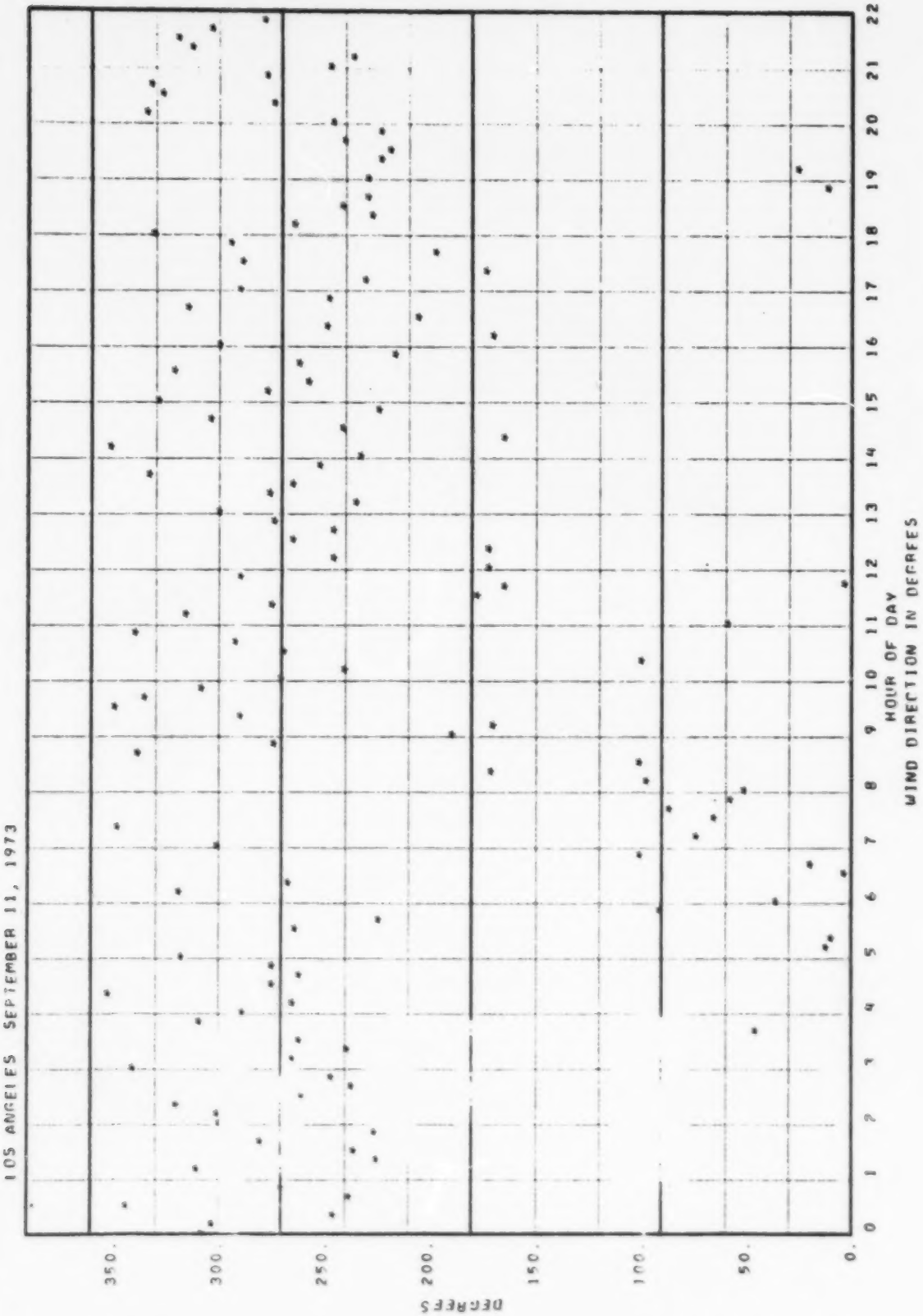

LOS ANGELES SEPTEMBER 10, 1973
WIND DIRECTION IN DEGREES
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

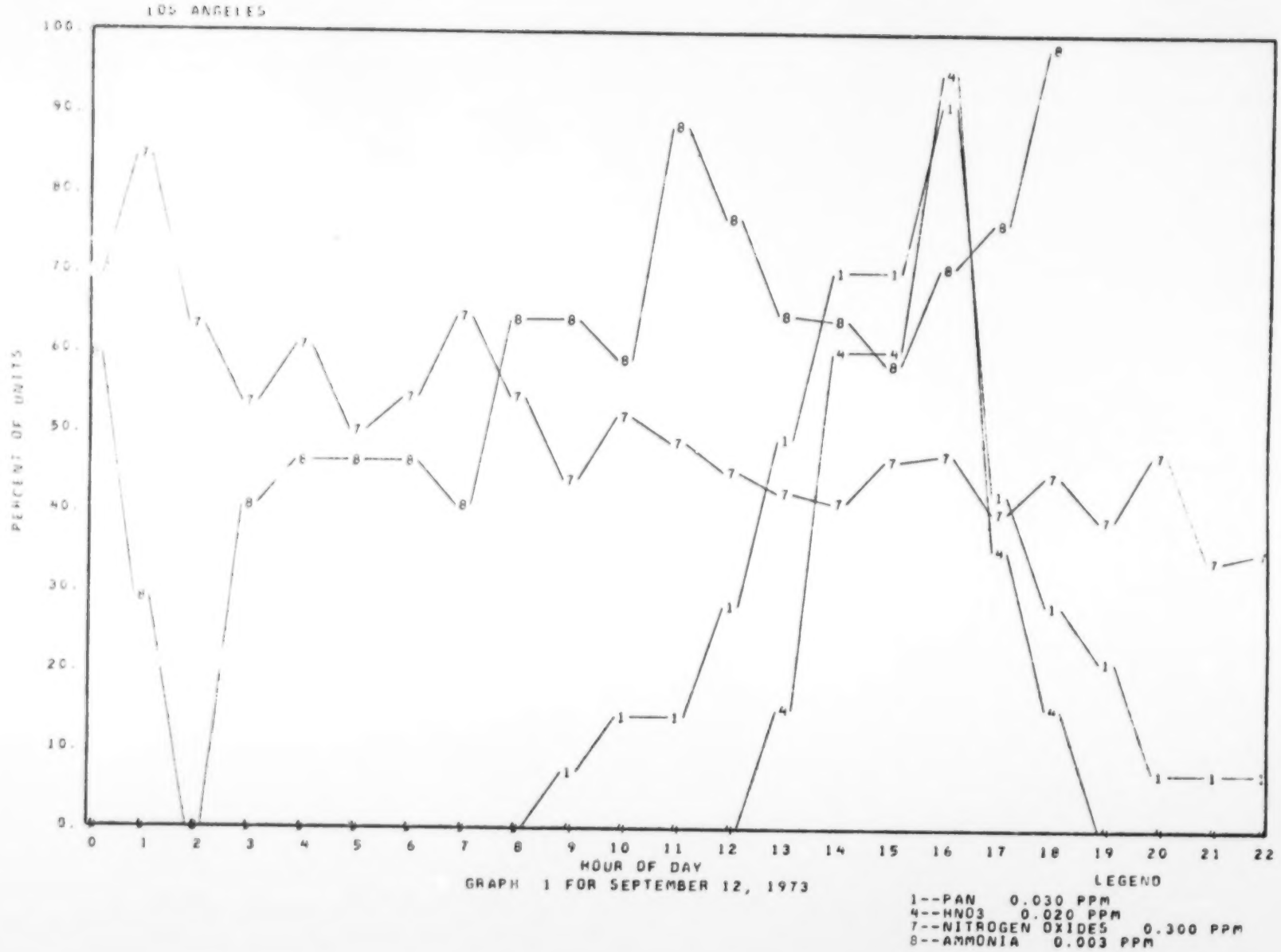

LOS ANGELES
PERFENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 11, 1973
LEGEND
1--PAN 0.030 PPM
4--HNO3 0.011 PPM
7--NITROGEN OXIDES 0.200 PPM
8--AMMONIA 0.004 PPM



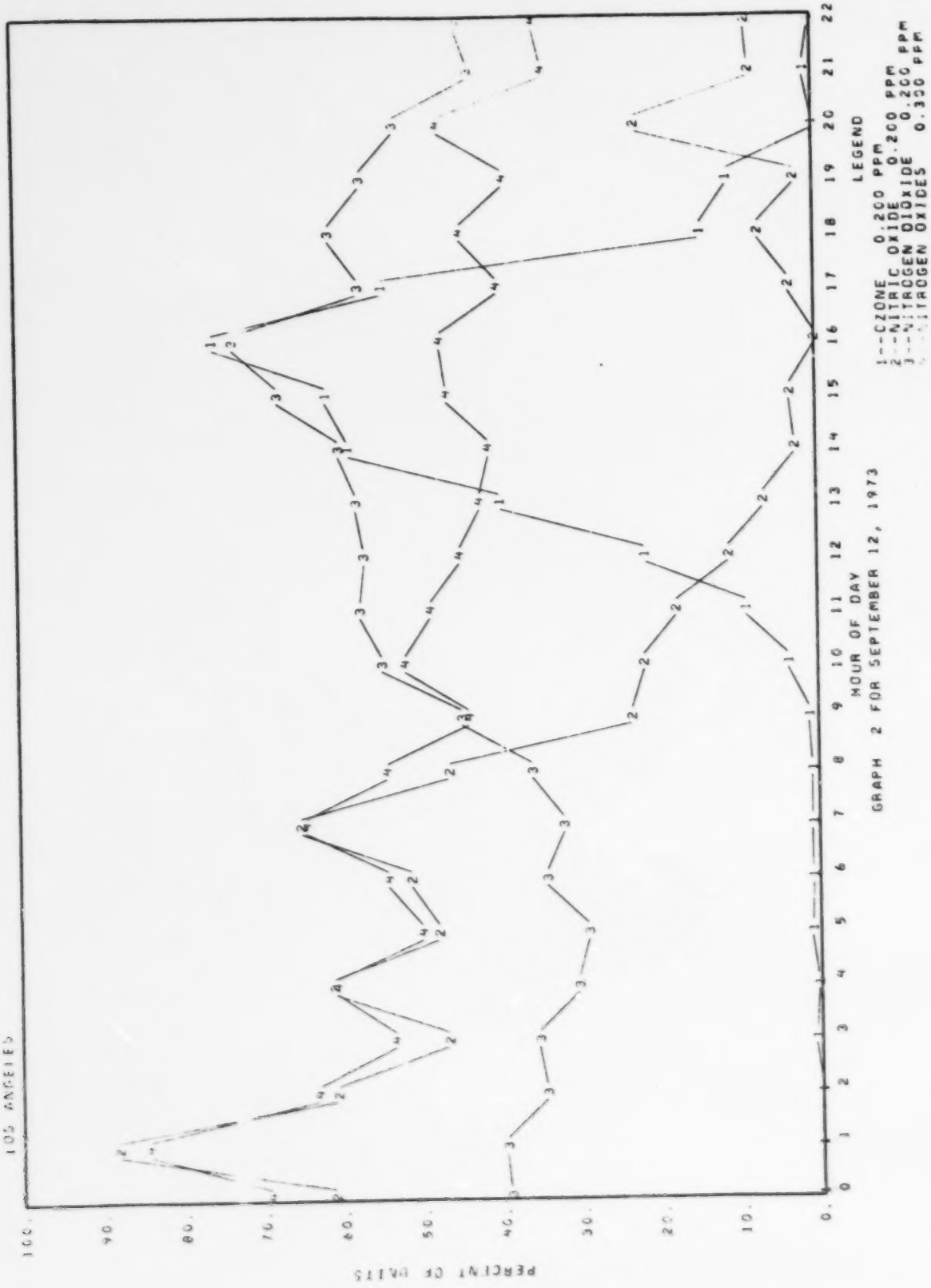
GRAPH 2 FOR SEPTEMBER 11, 1973

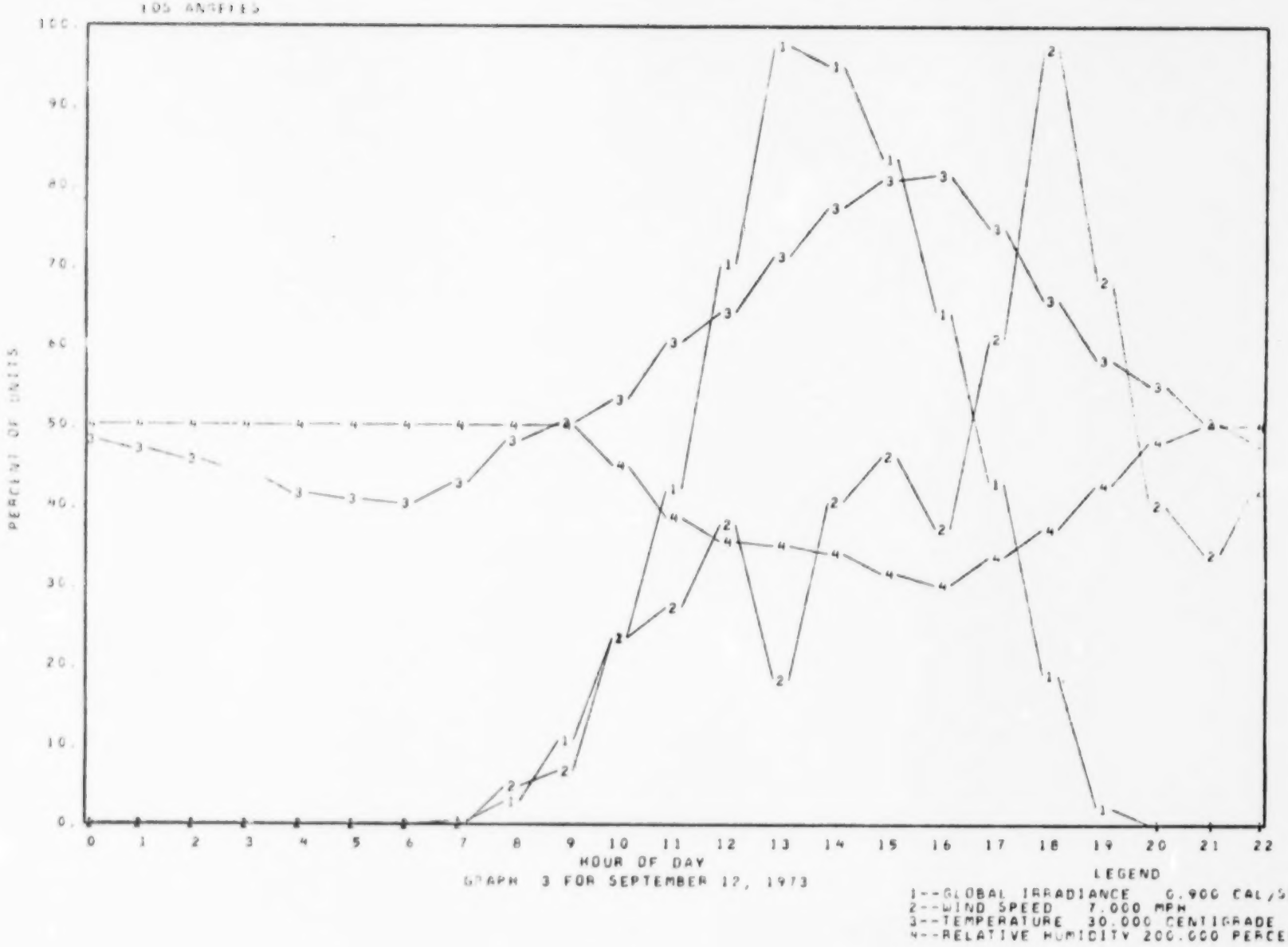

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 11, 1973
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MI
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

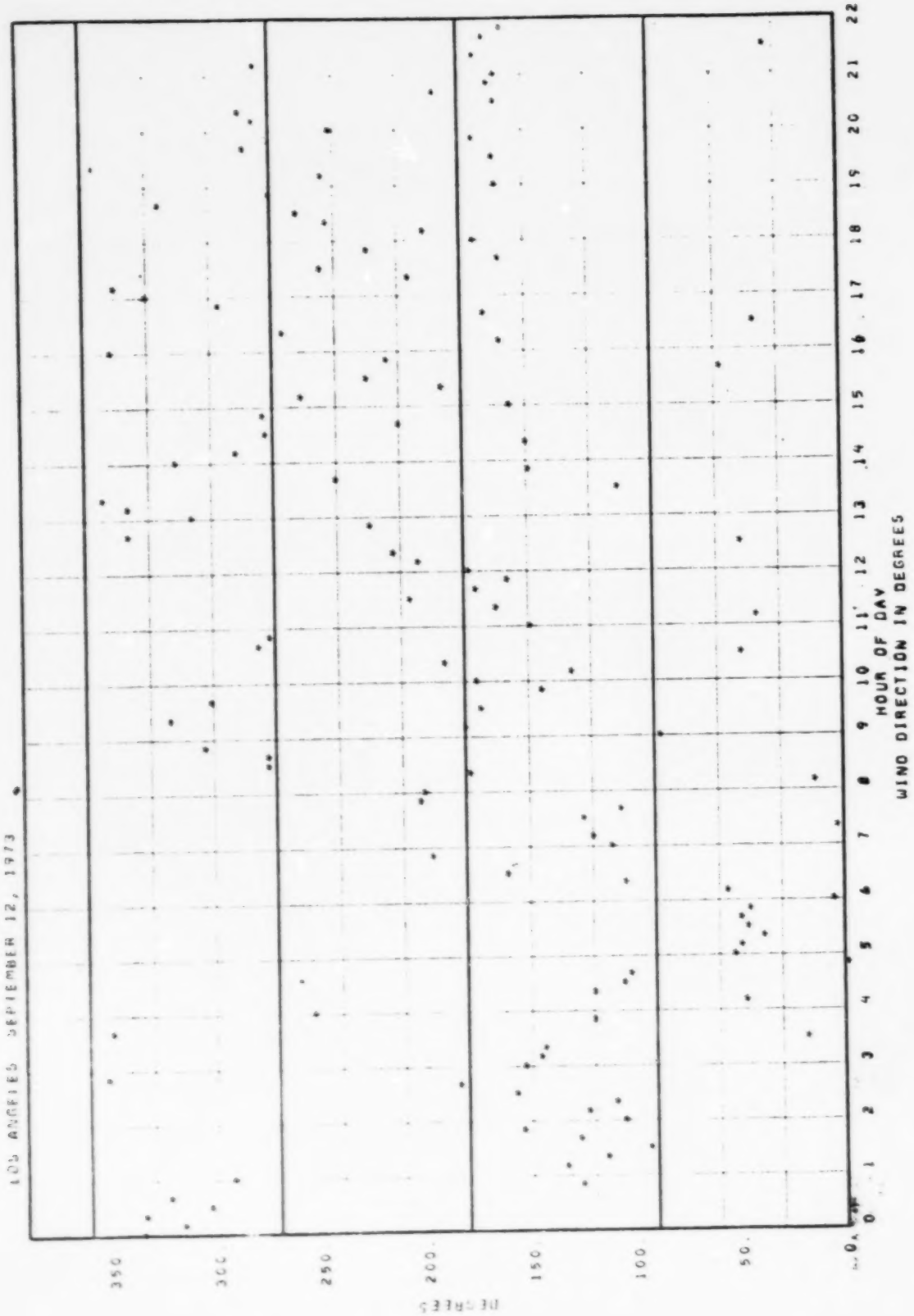

LOS ANGELES SEPTEMBER 11, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

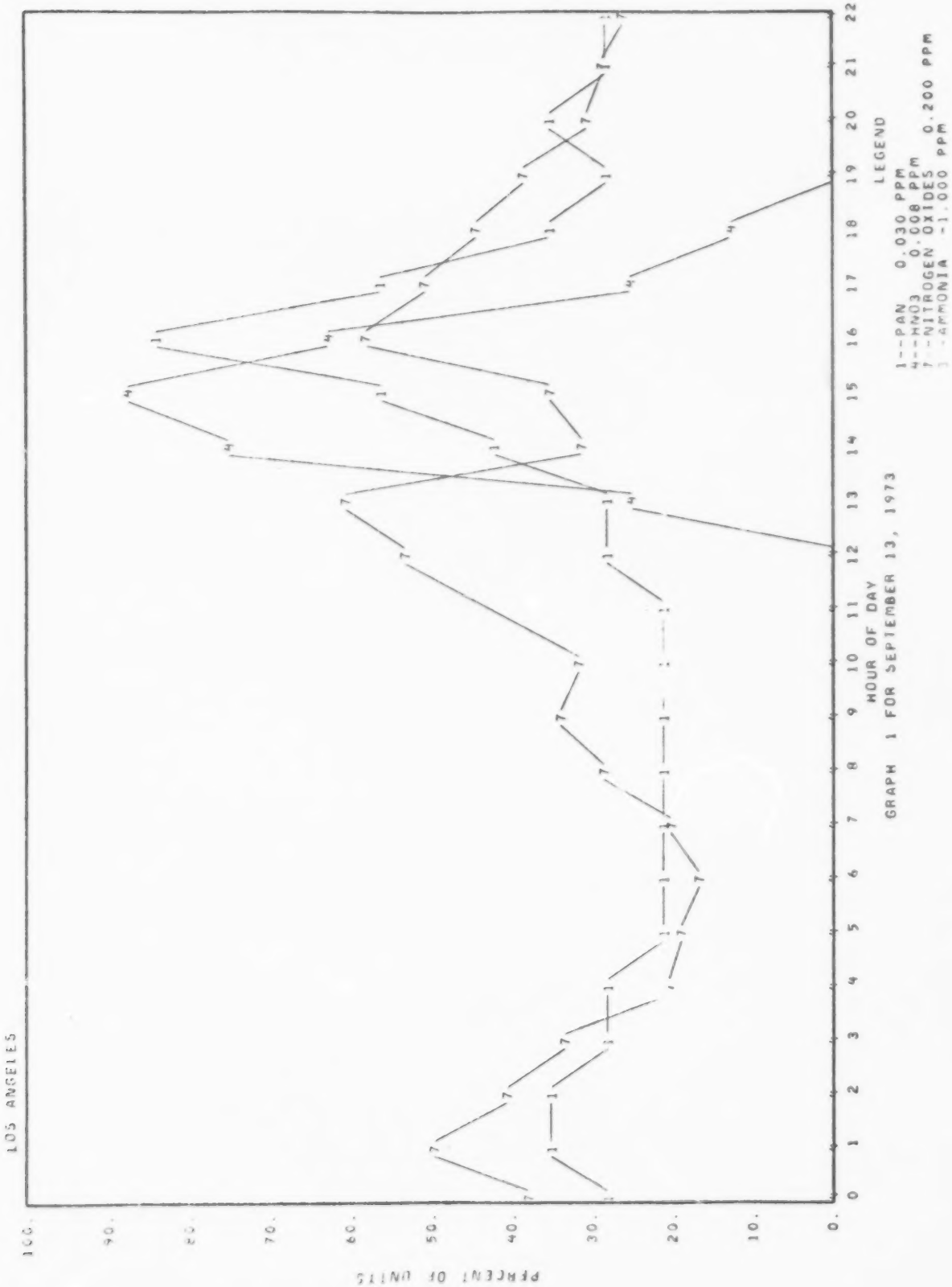


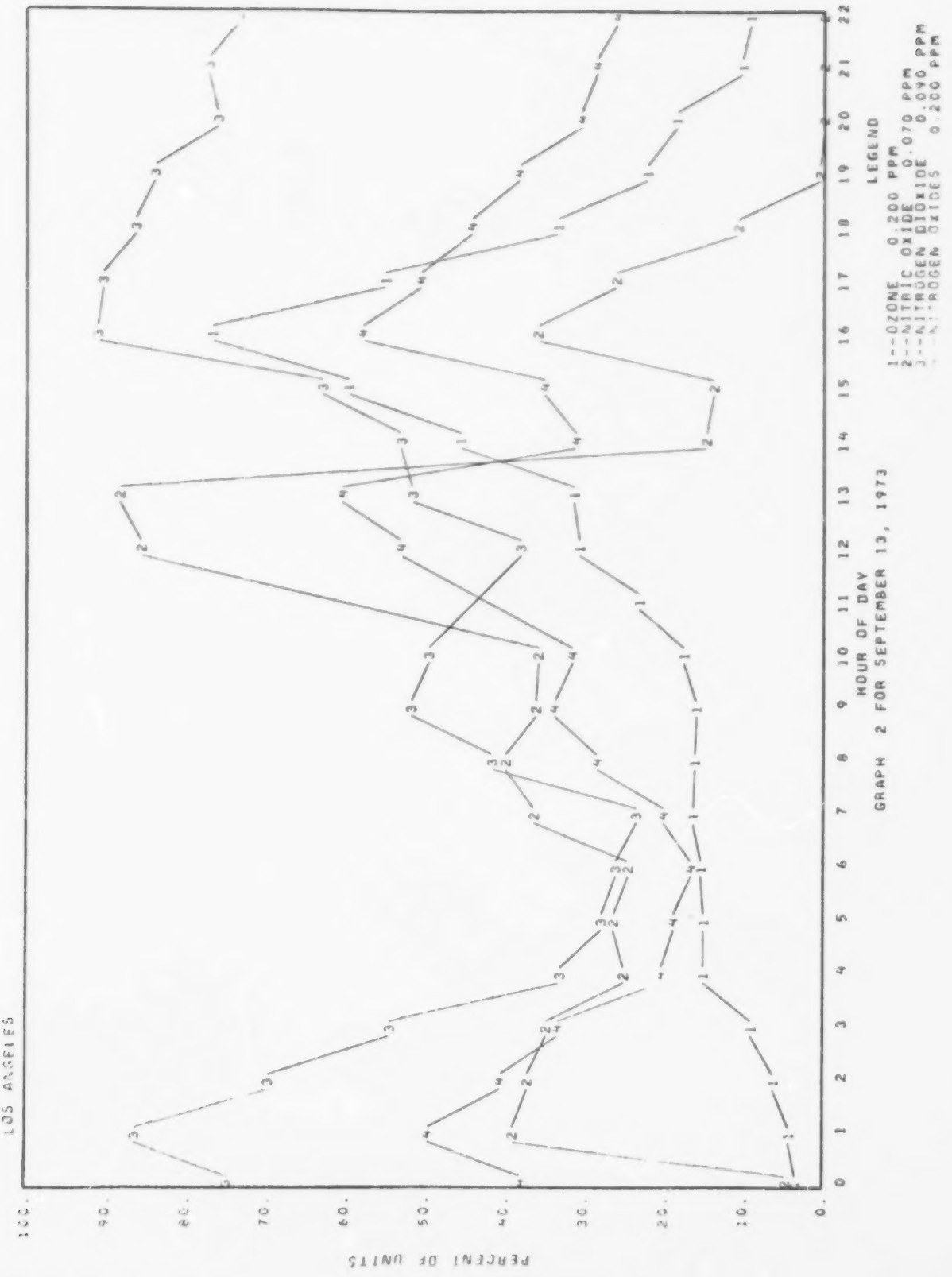
GRAPH 1 FOR SEPTEMBER 12, 1973


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 12, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.200 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.300 PPM

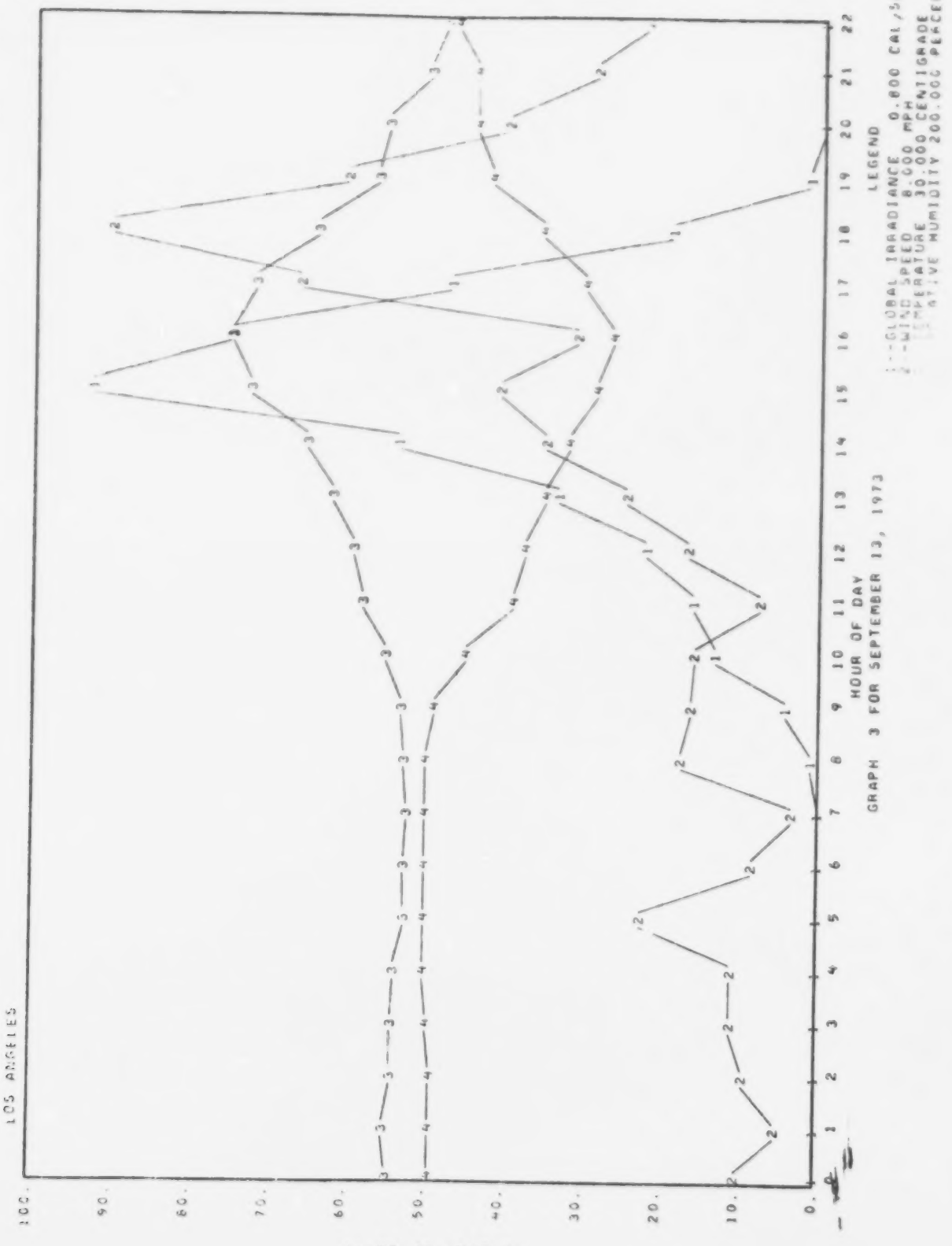

LOS ANGELES
PERCENT OF UNITS
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 12, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MI
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

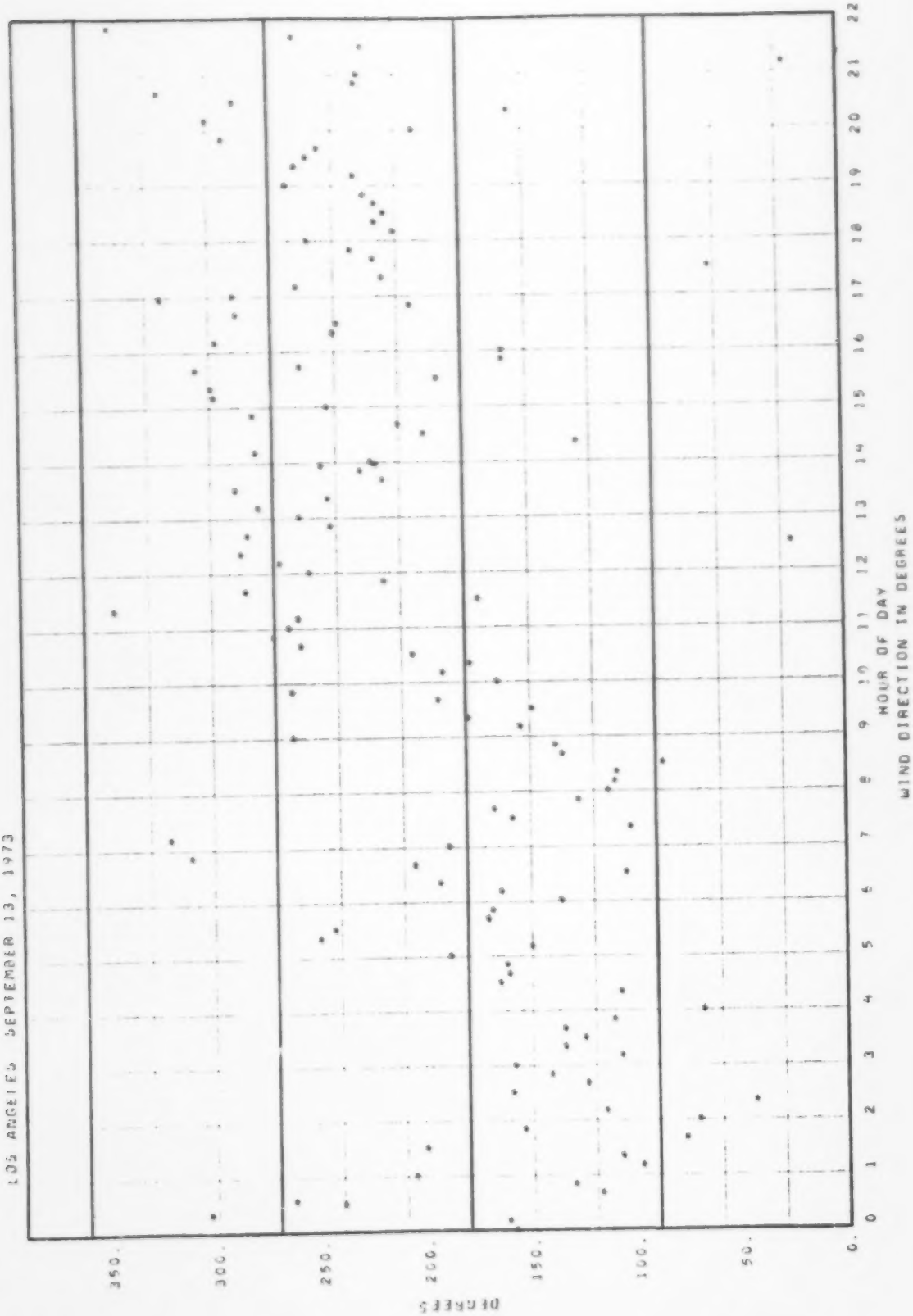

LOS ANGELES SEPTEMBER 12, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
50
100
150
200
250
300
350

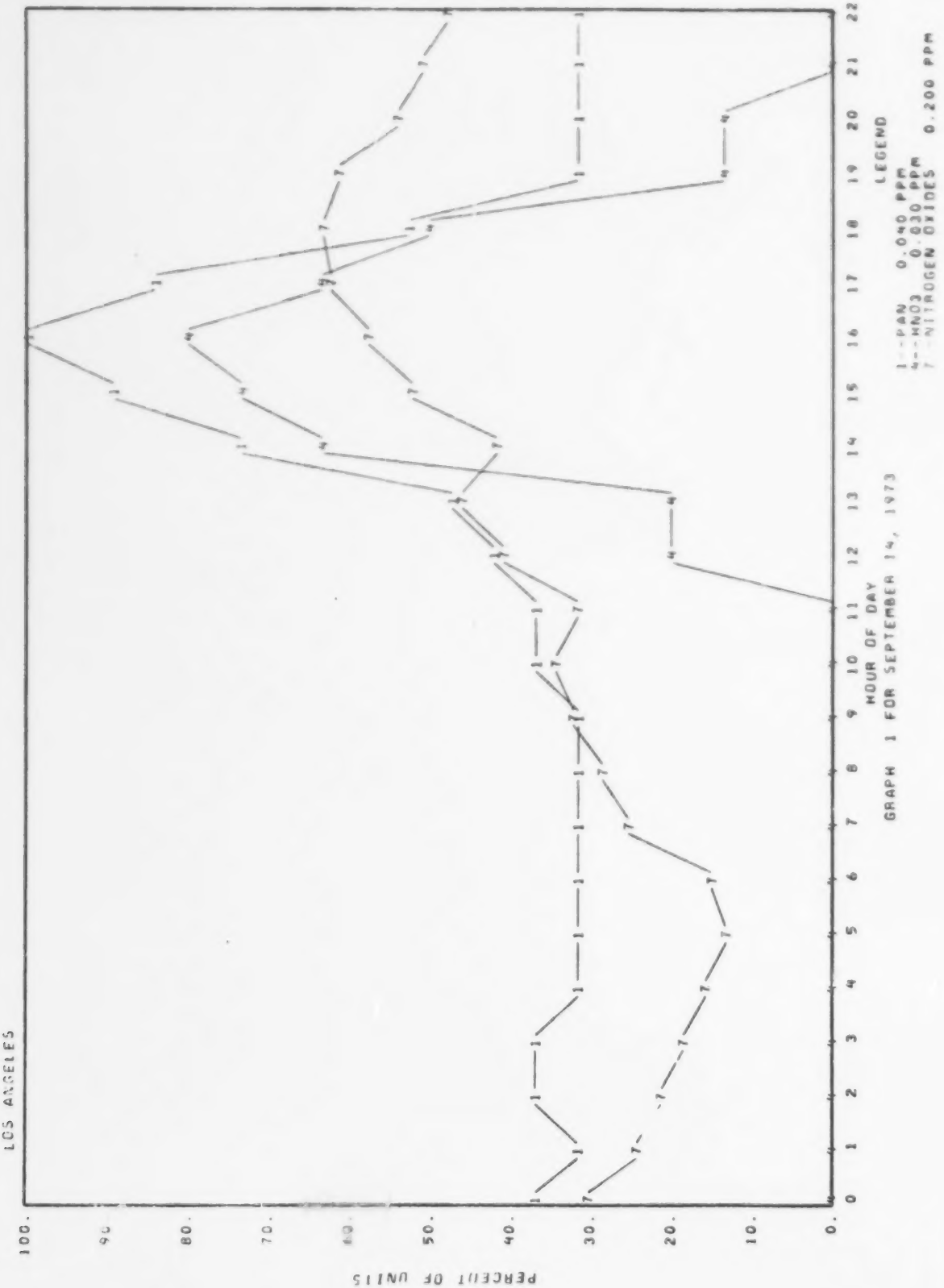

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 13, 1973
LEGEND
1--PAN 0.030 PPM
4--HNO3 0.008 PPM
7--NITROGEN OXIDES 0.200 PPM
--AMMONIA -1.000 PPM

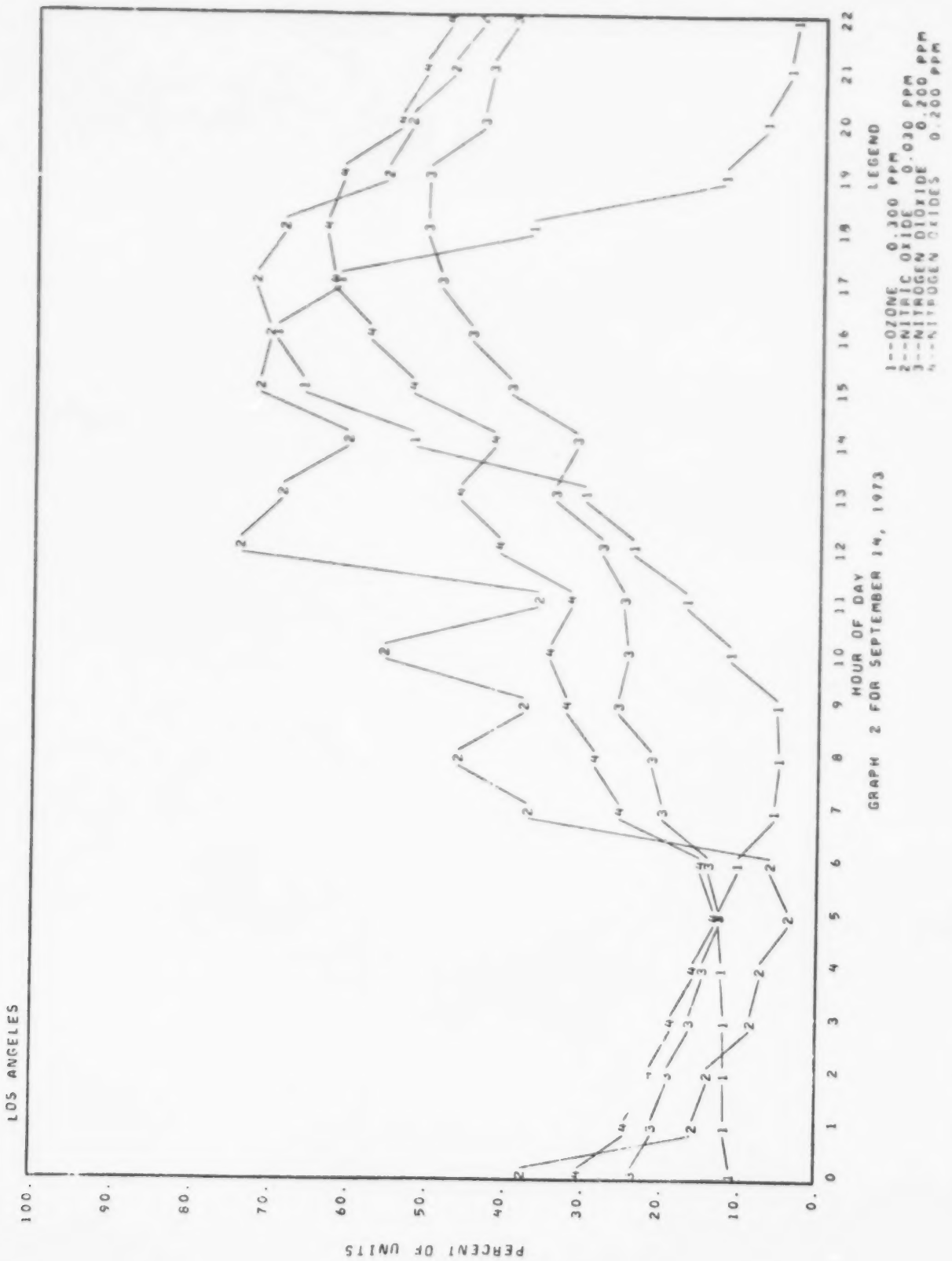


GRAPH 2 FOR SEPTEMBER 13, 1973

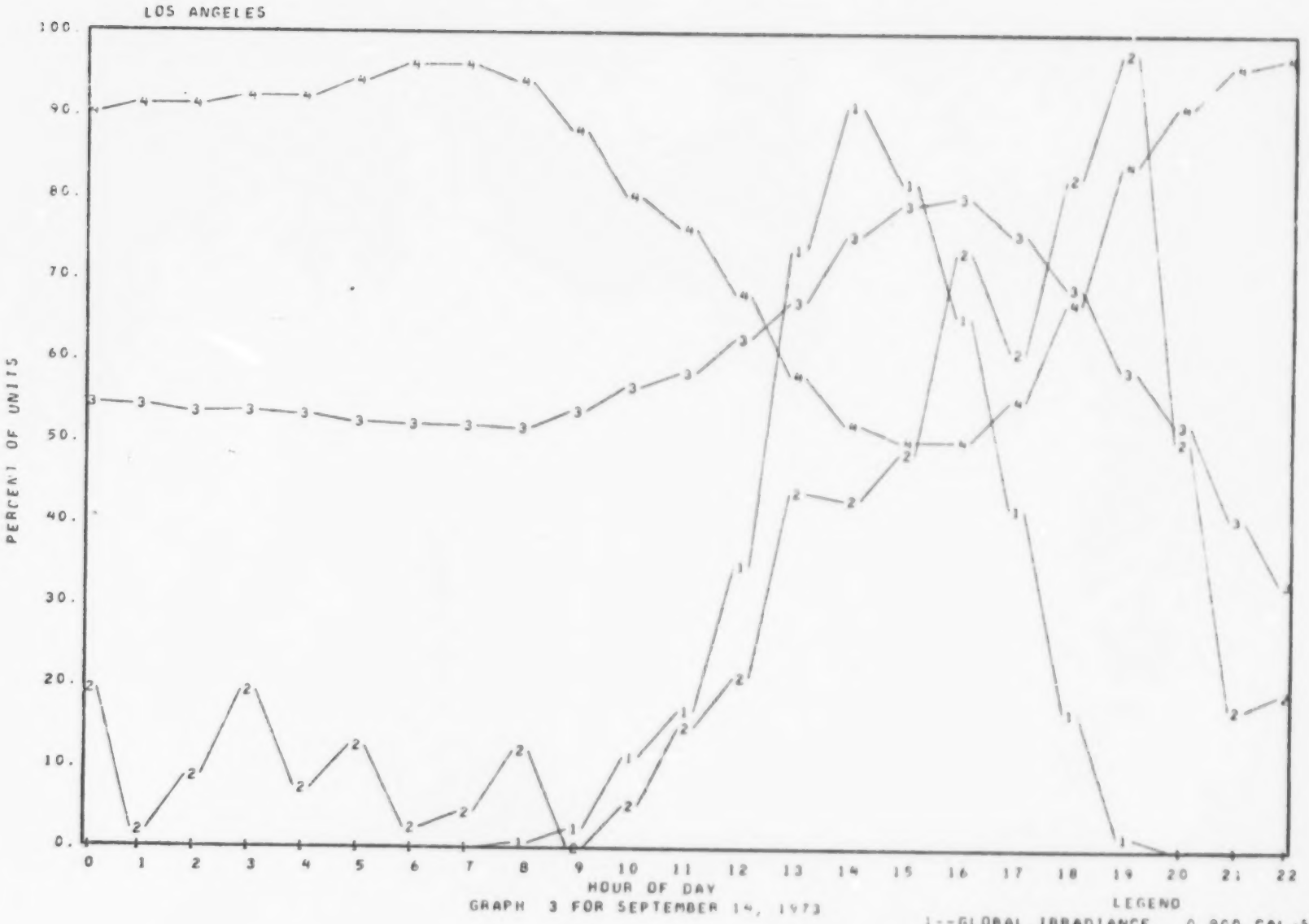

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 13, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.800 CAL/SQ.CM/MIN
2--WIND SPEED 8.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

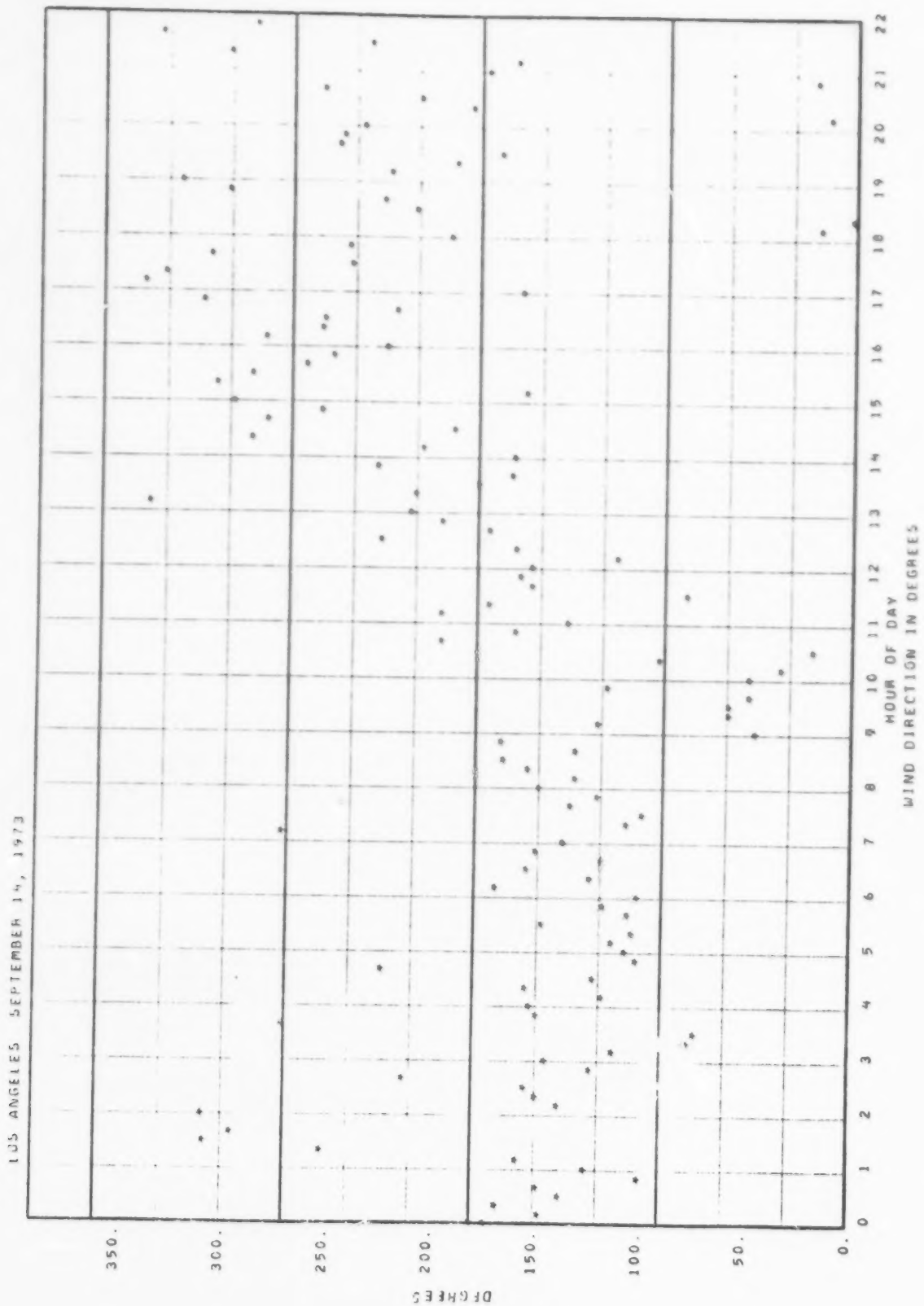

LOS ANGELES SEPTEMBER 13, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

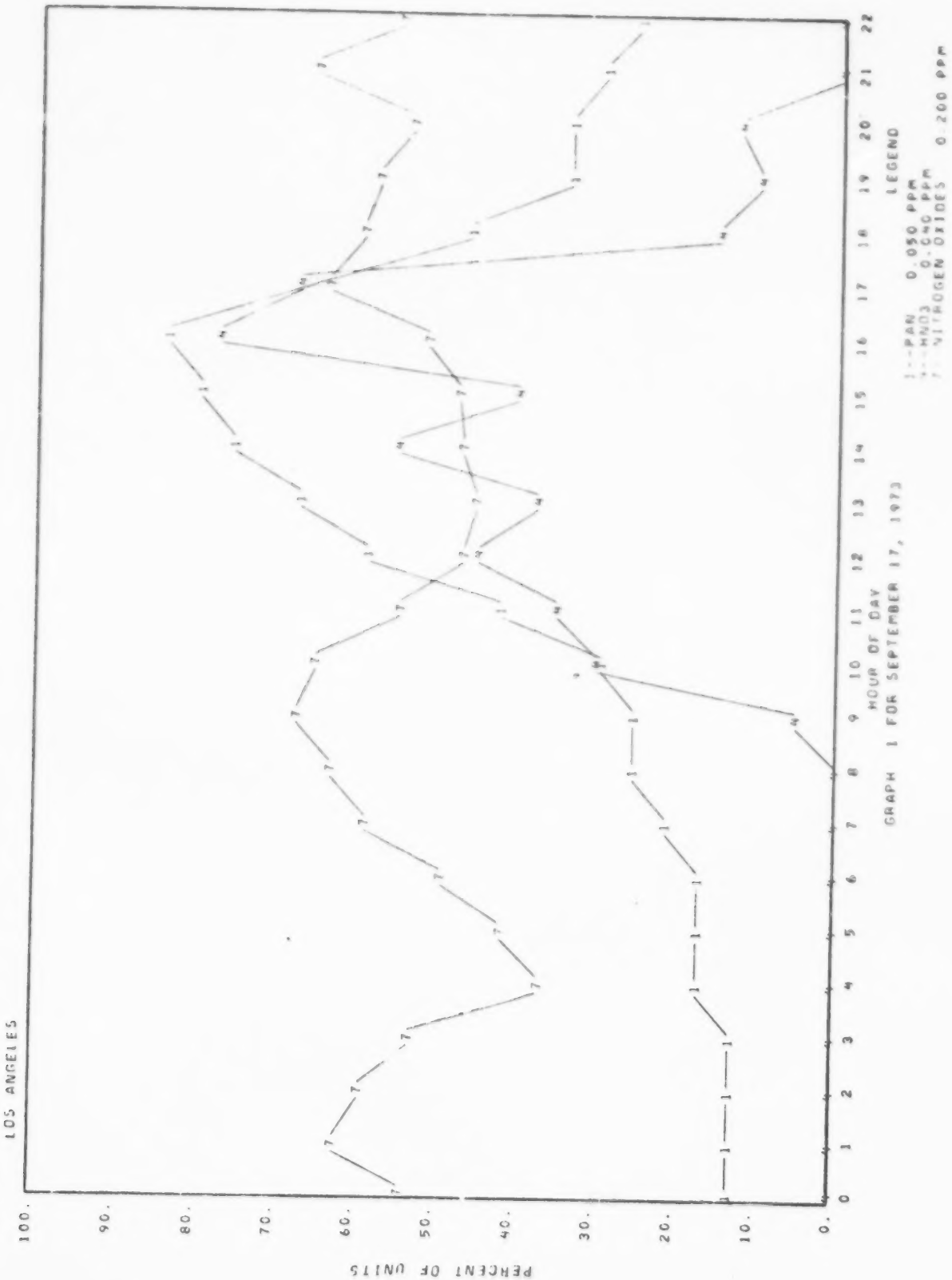

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 14, 1973
LEGEND
1--PAN 0.040 PPM
4--HNO3 0.030 PPM
7--NITROGEN OXIDES 0.200 PPM

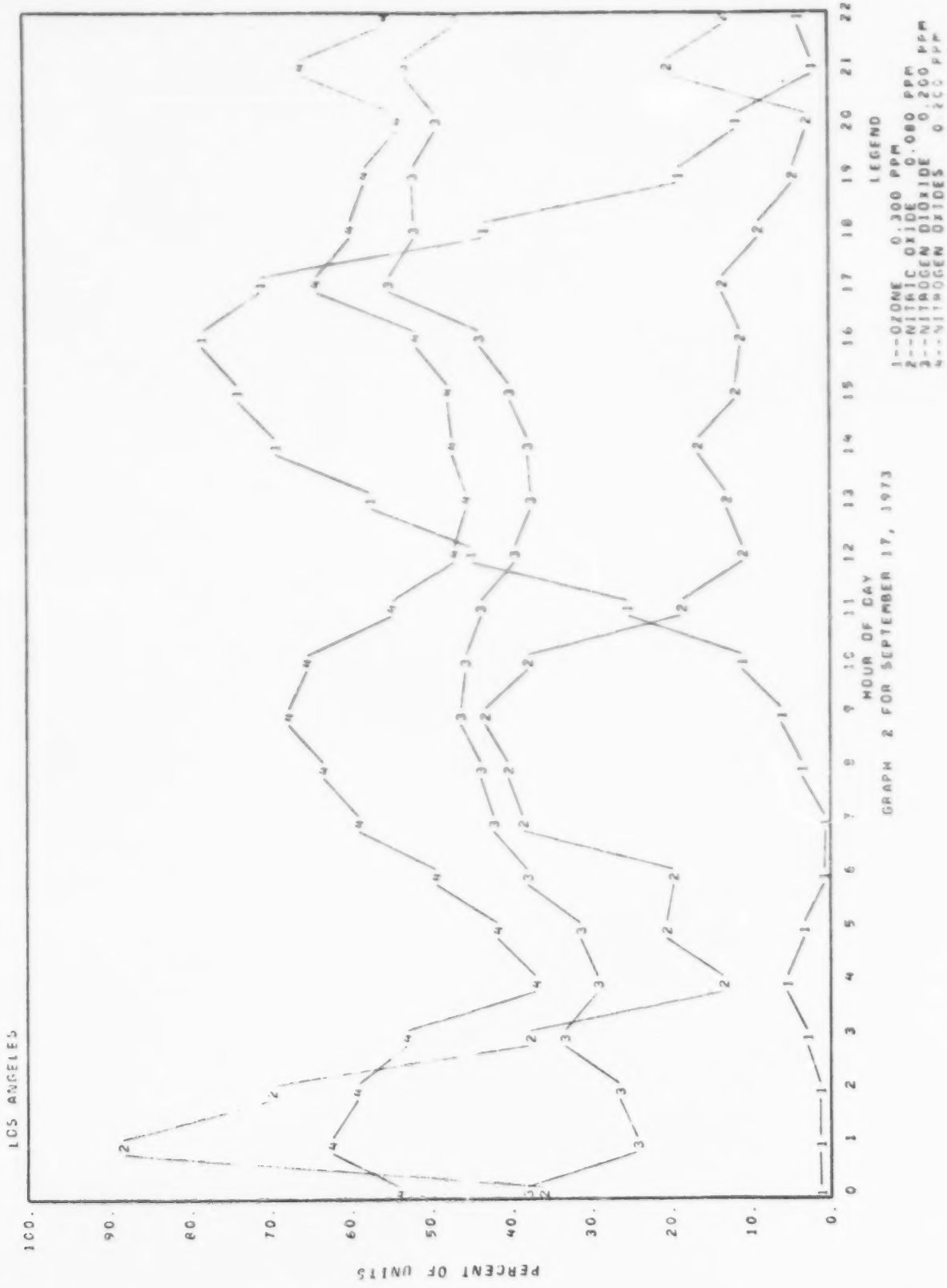


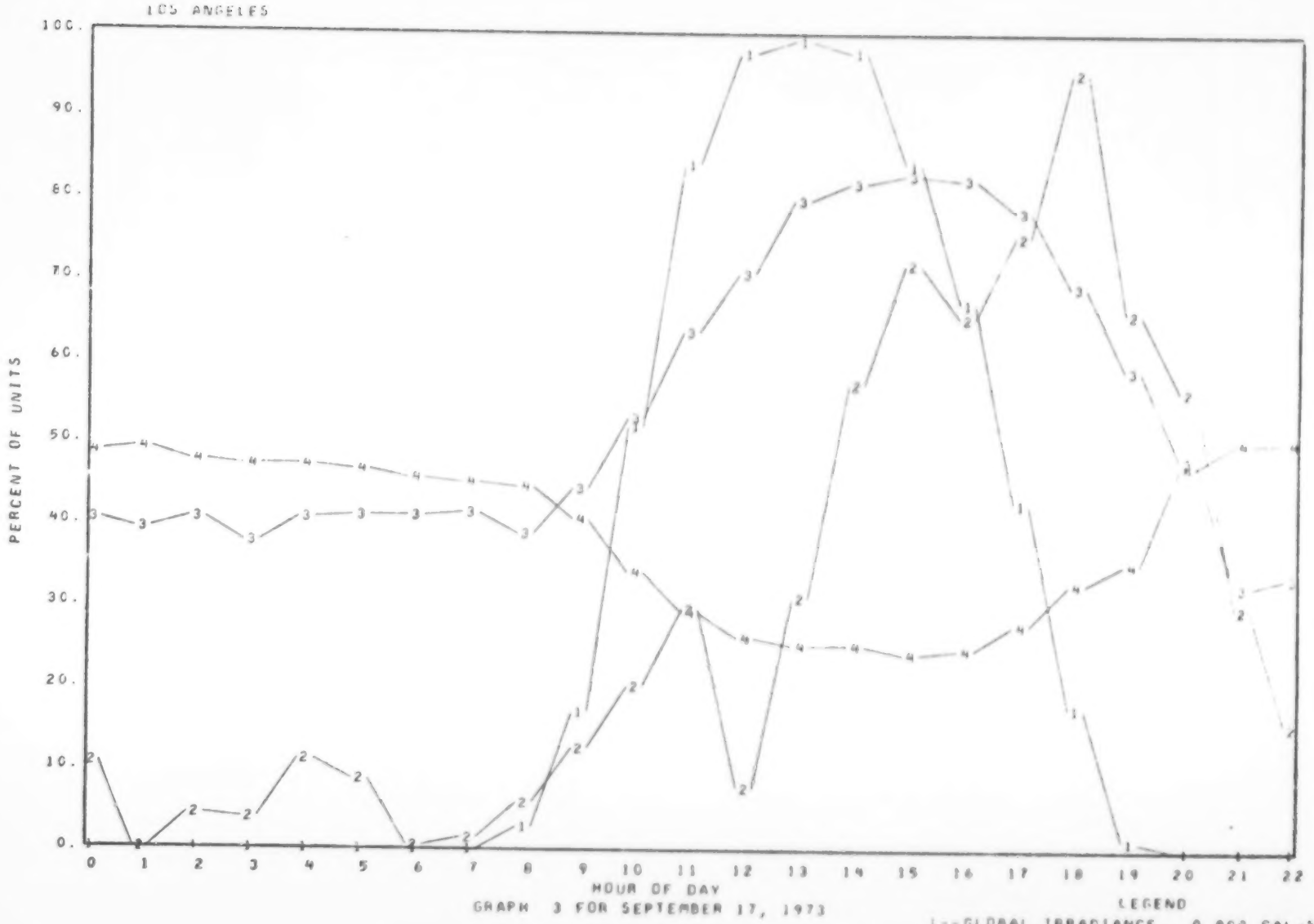
GRAPH 2 FOR SEPTEMBER 14, 1973


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 14, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/M
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE


LOS ANGELES SEPTEMBER 14, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 17, 1973
LEGEND
1--PAN 0.050 PPM
1---HNO3 0.040 PPM
7 NITROGEN OXIDES 0.200 PPM

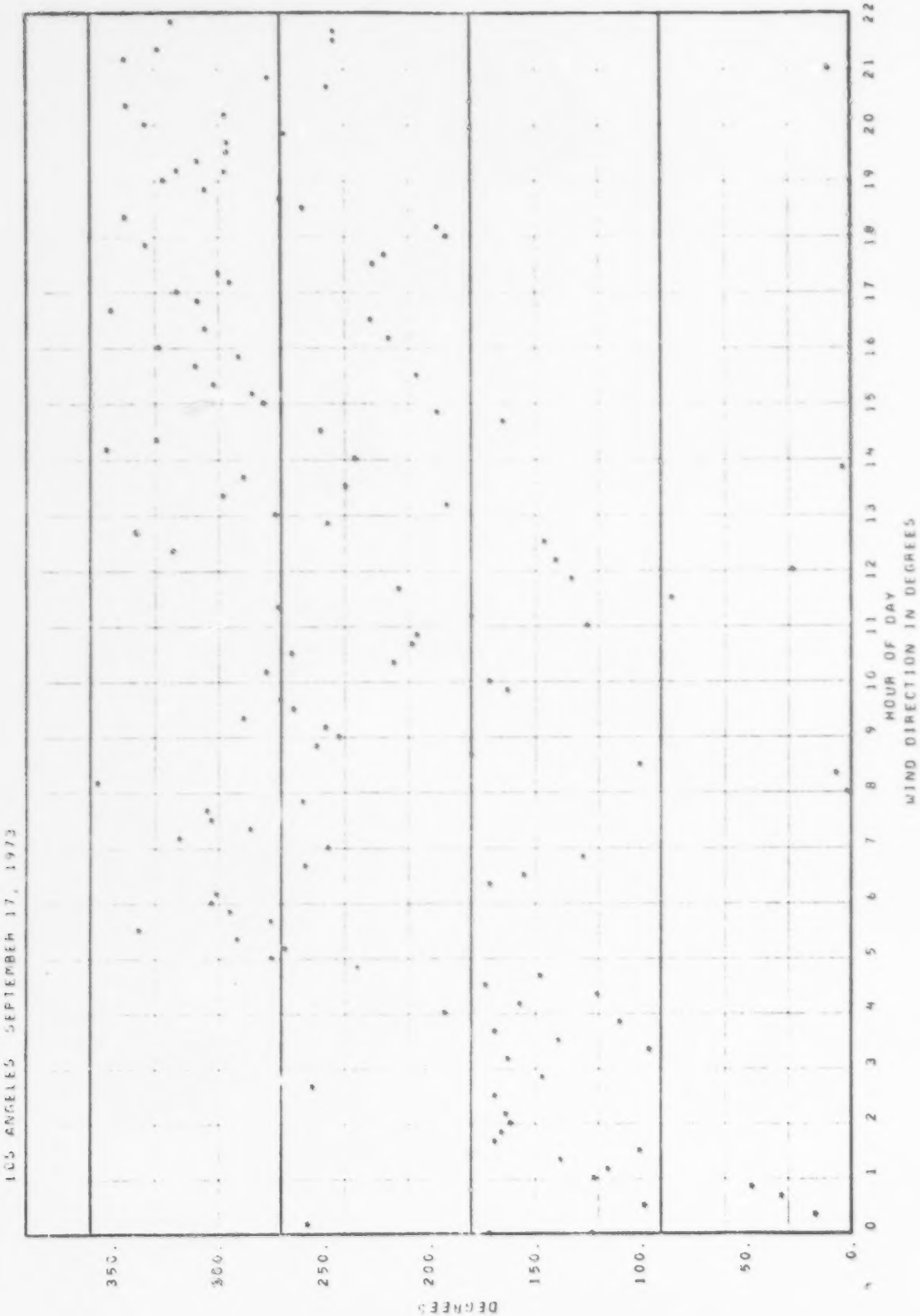

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 17, 1973
LEGEND
1--OZONE 0.300 PPM
2--NITRIC OXIDE 0.080 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.280 PPM

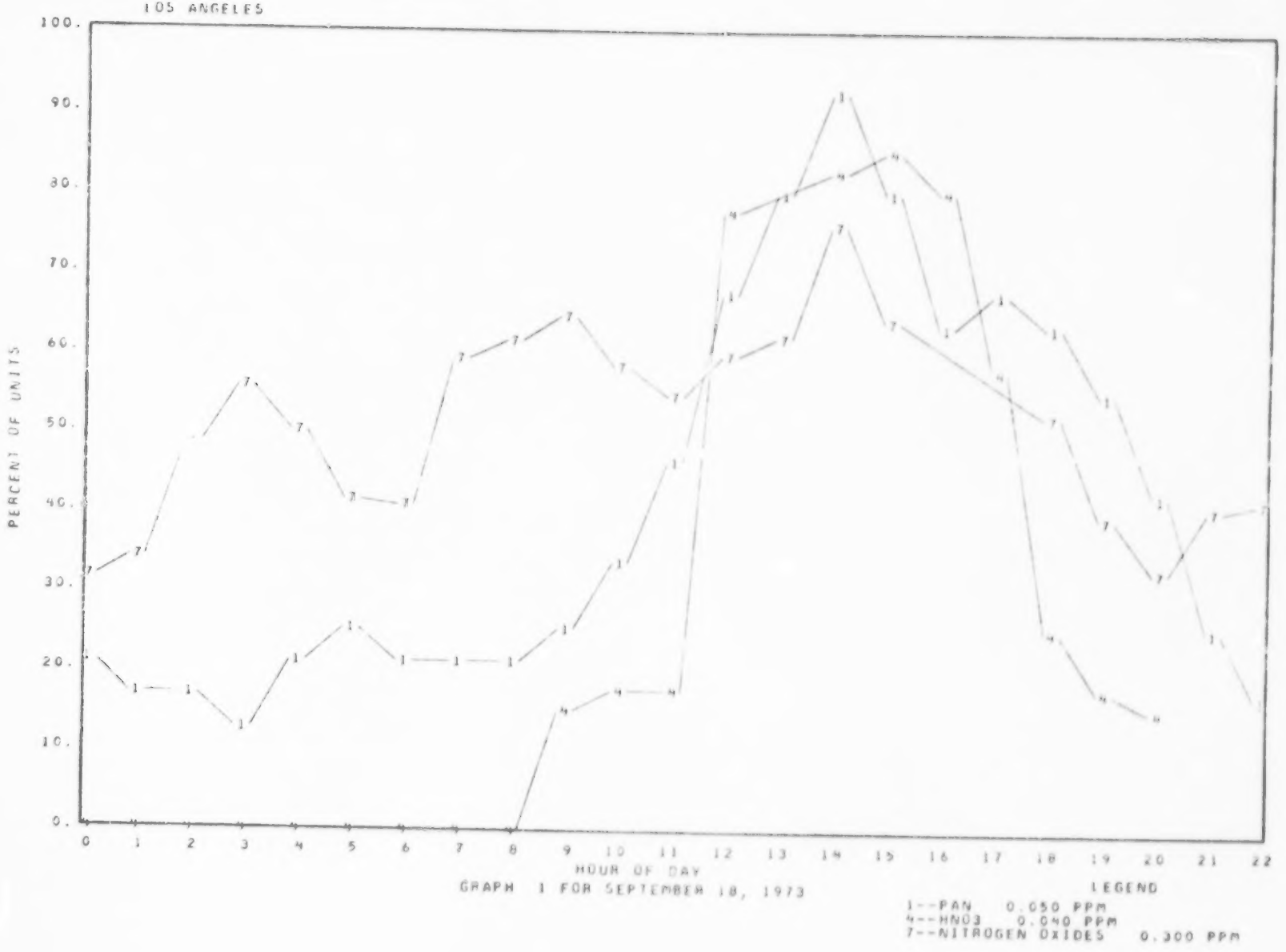


GRAPH 3 FOR SEPTEMBER 17, 1973

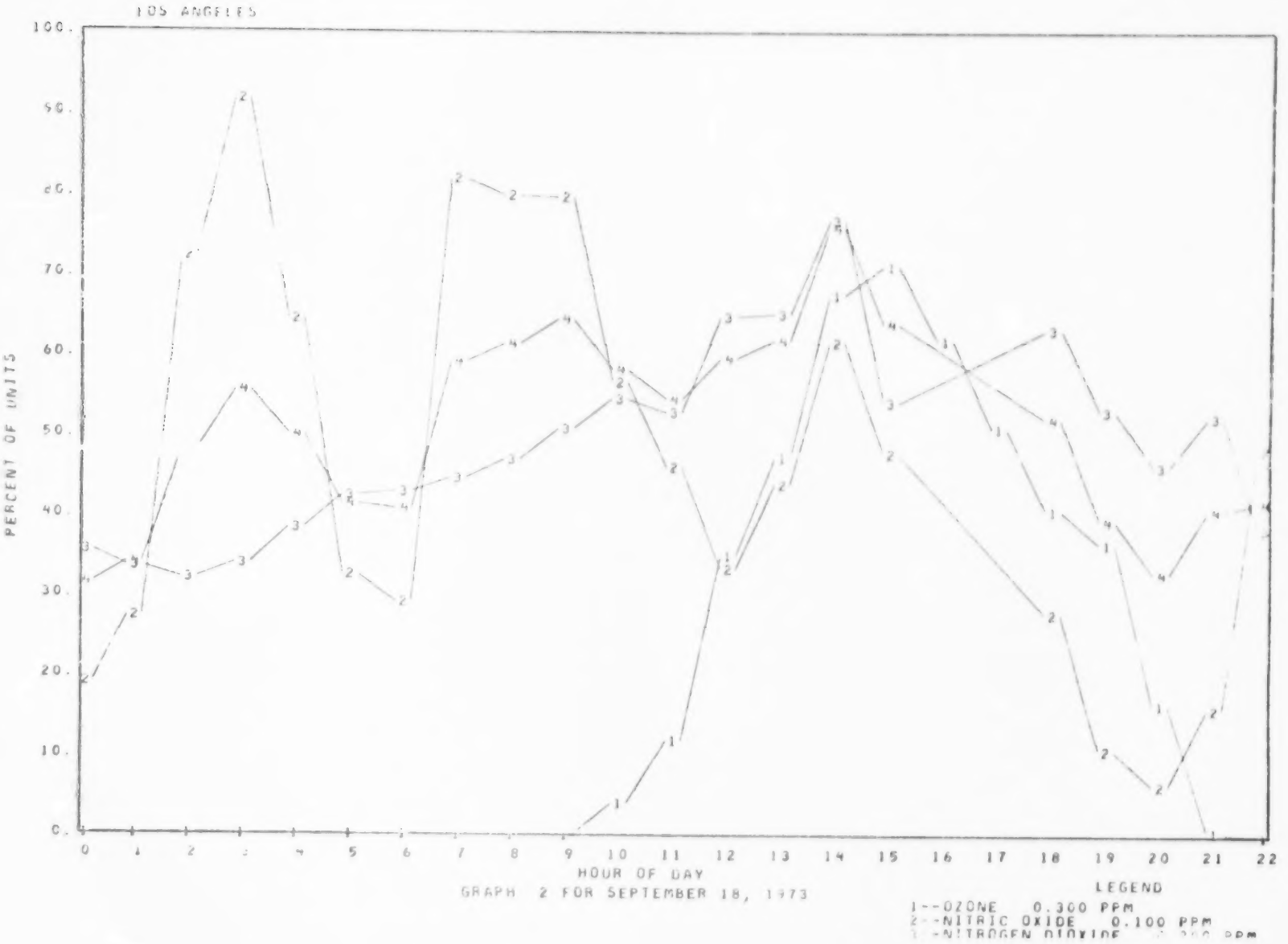
LEGEND

1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MI
2--WIND SPEED 7.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

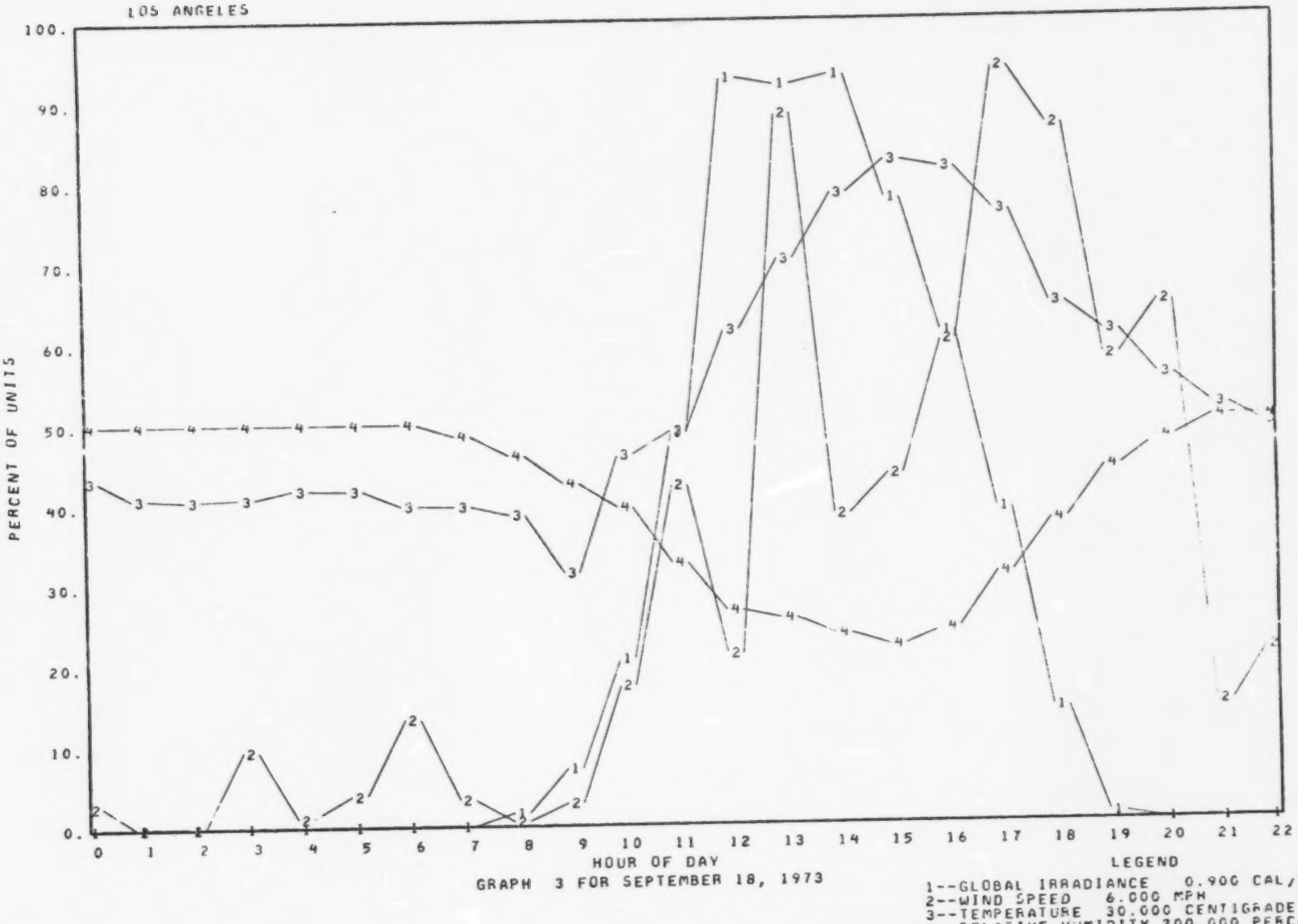

LOS ANGELES SEPTEMBER 17, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES



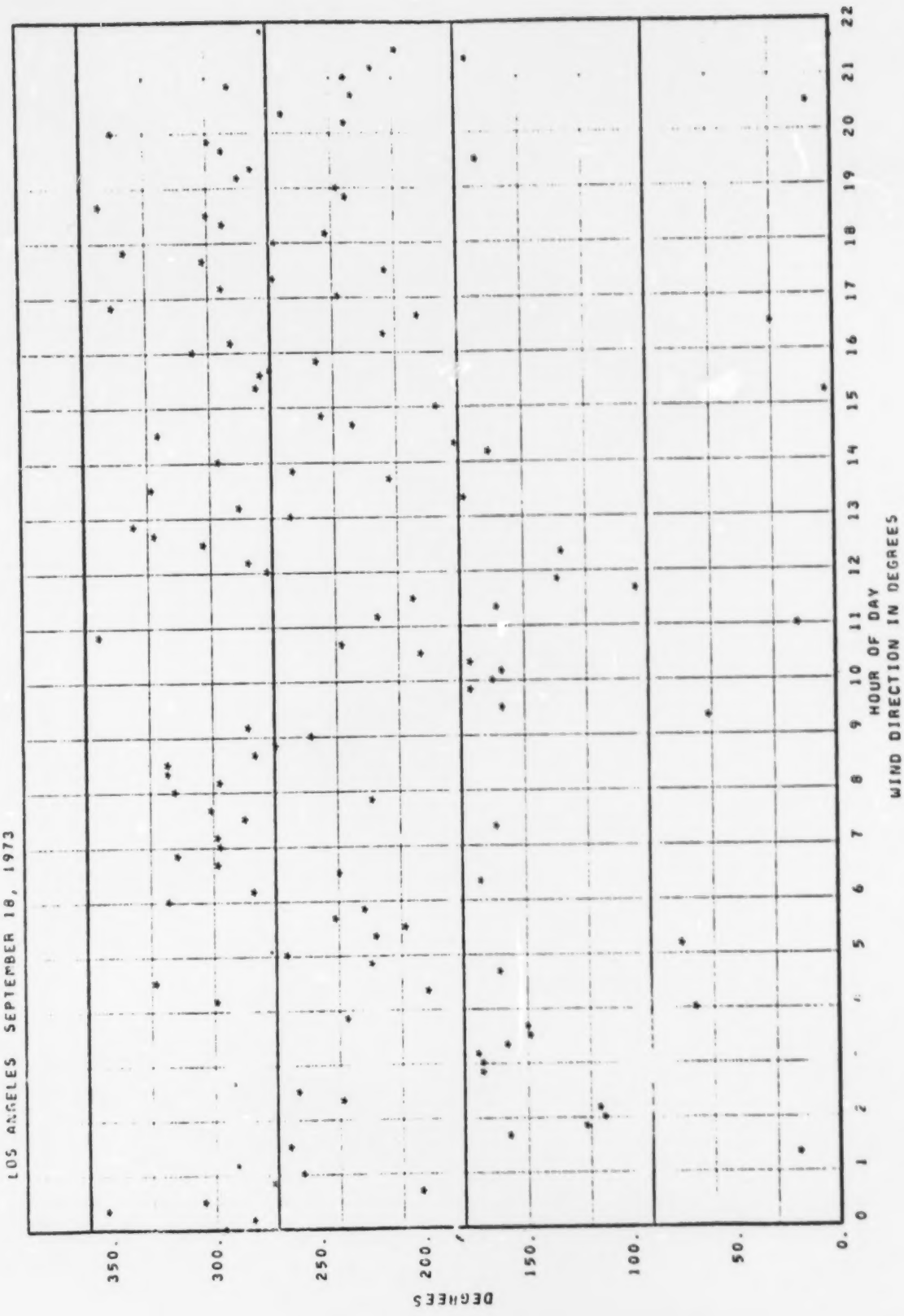
GRAPH 1 FOR SEPTEMBER 18, 1973

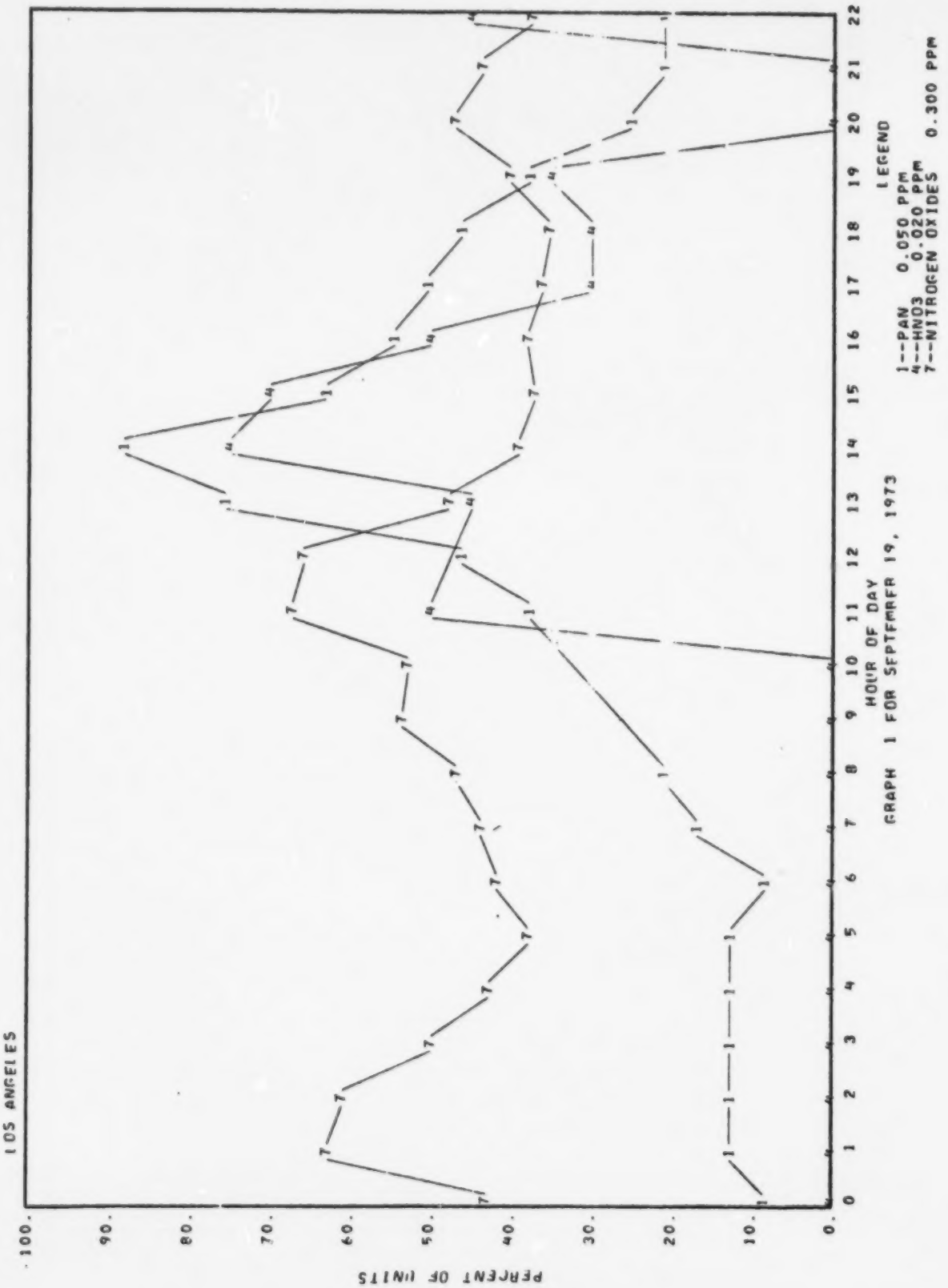


GRAPH 2 FOR SEPTEMBER 18, 1973

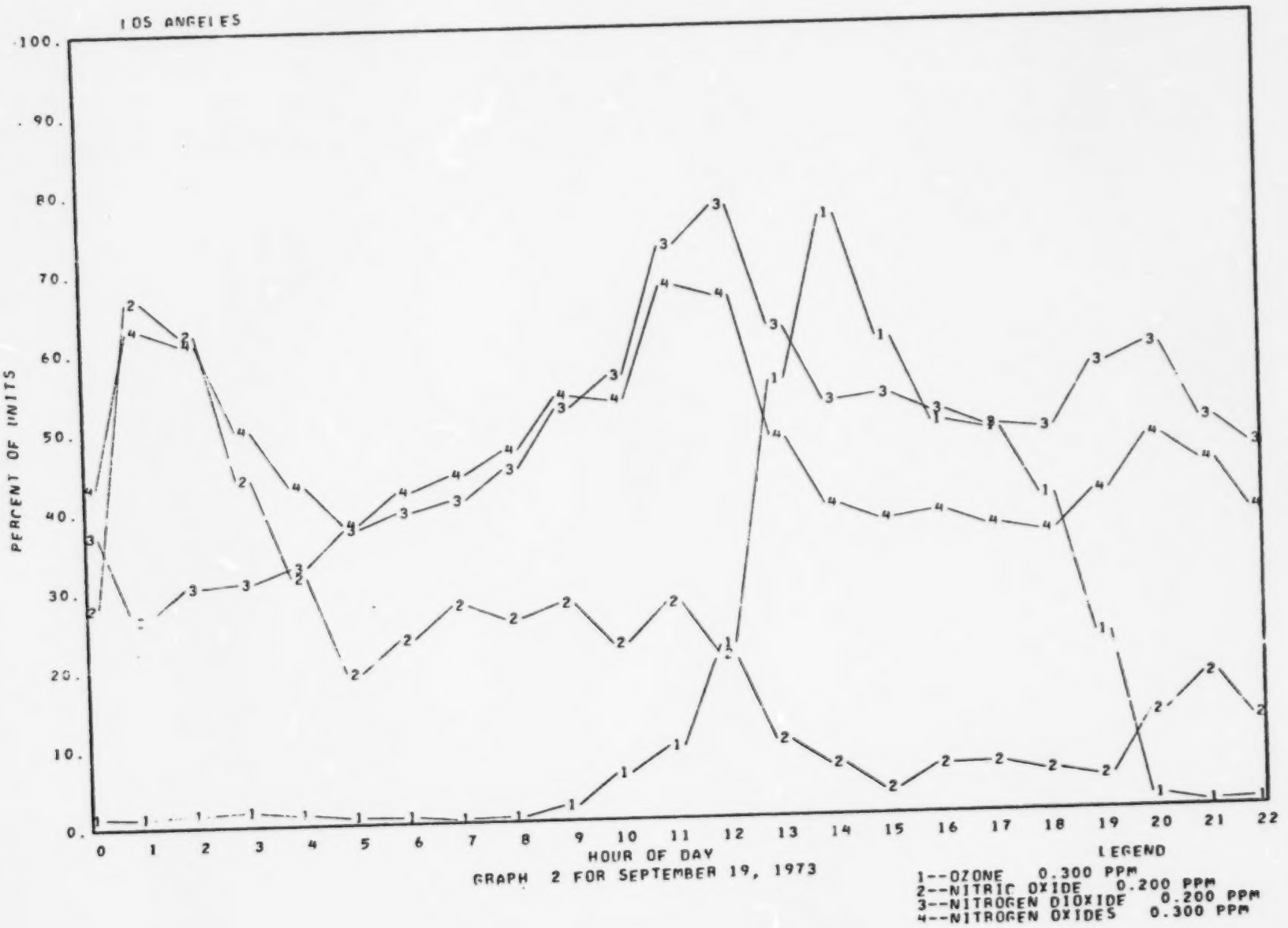


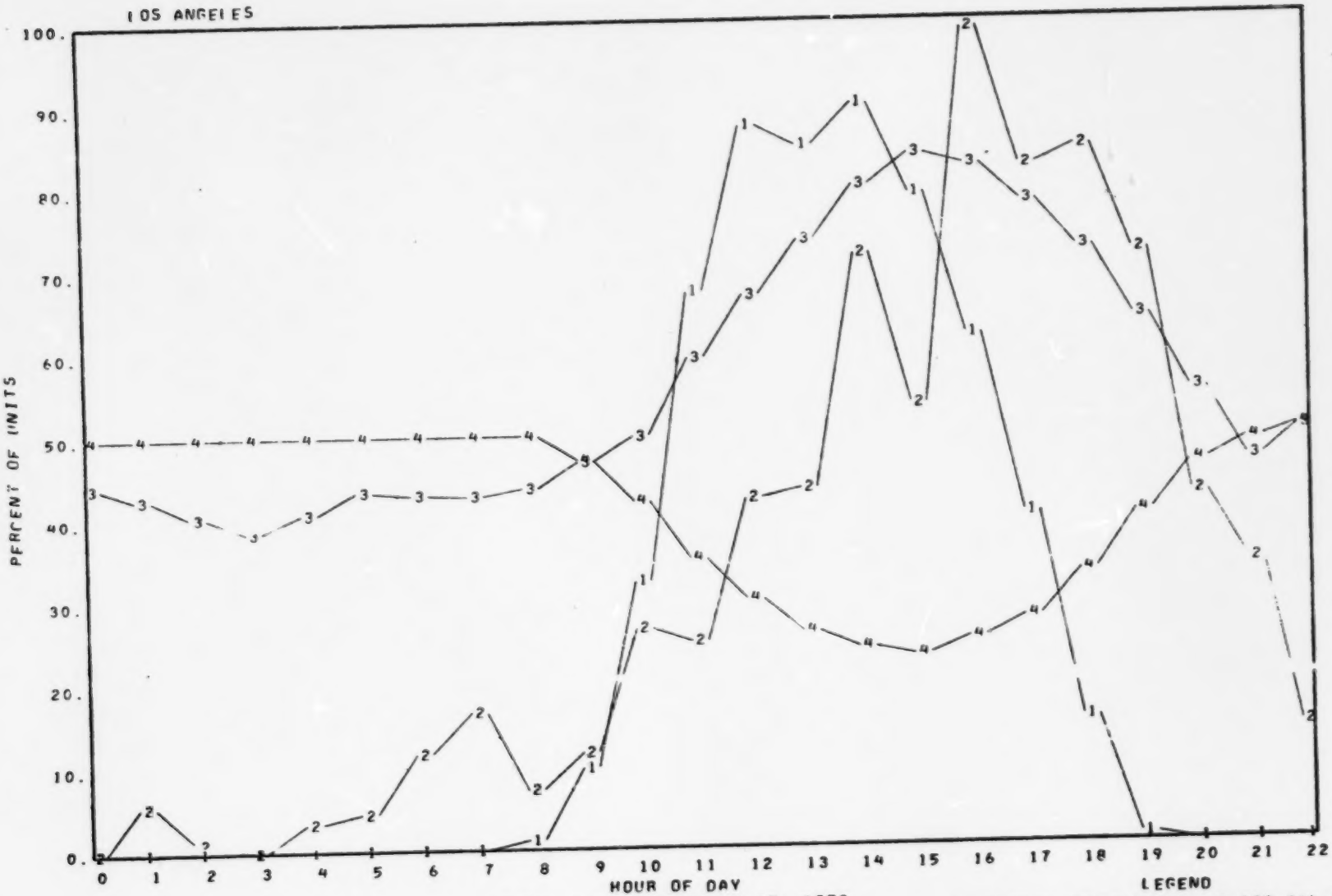
GRAPH 3 FOR SEPTEMBER 18, 1973


LOS ANGELES SEPTEMBER 18, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



GRAPH 1 FOR SEPTEMBER 19, 1973

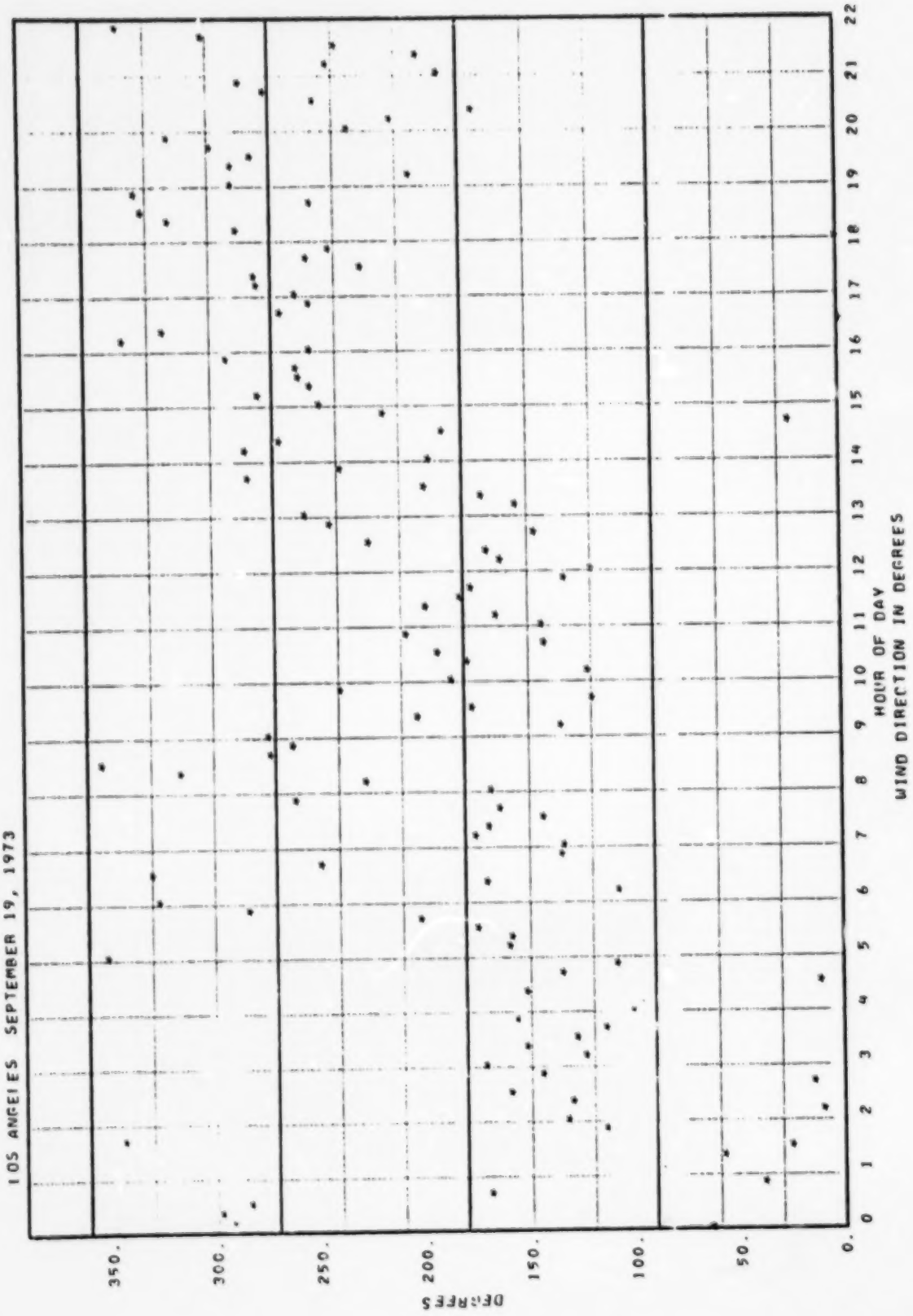

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 19, 1973
LEGEND
1--OZONE 0.300 PPM
2--NITRIC OXIDE 0.200 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.300 PPM

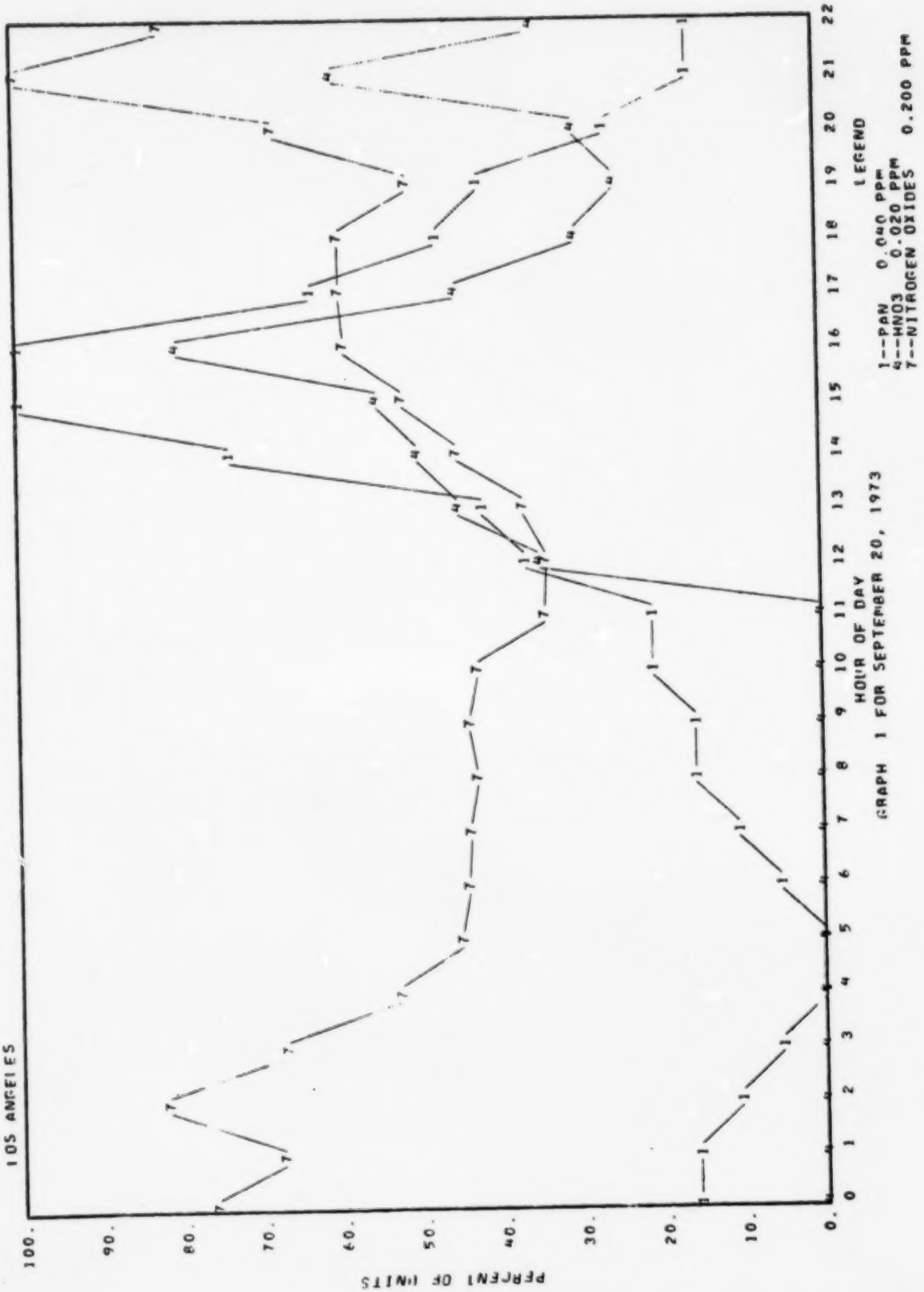


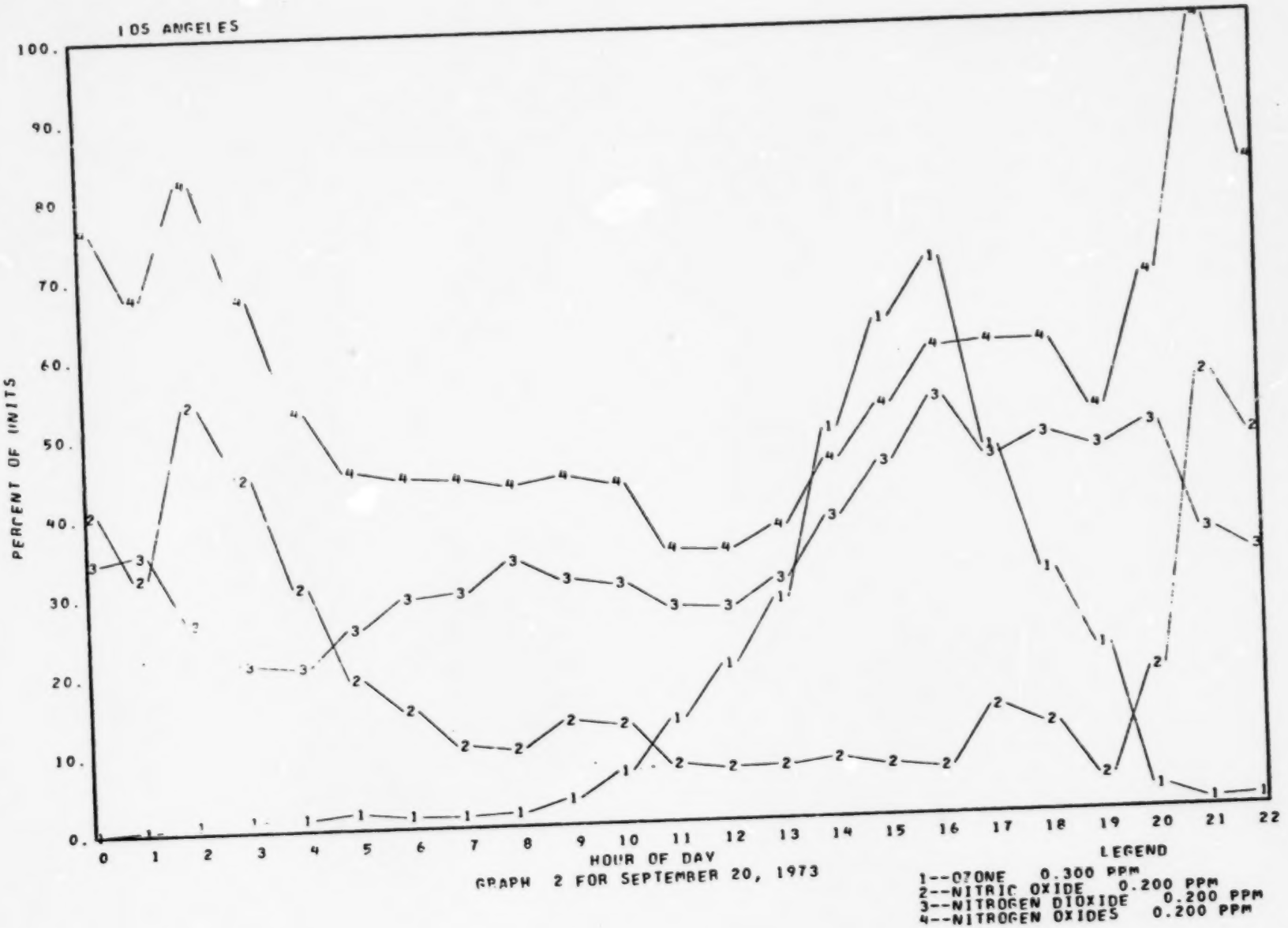
GRAPH 3 FOR SEPTEMBER 19, 1973

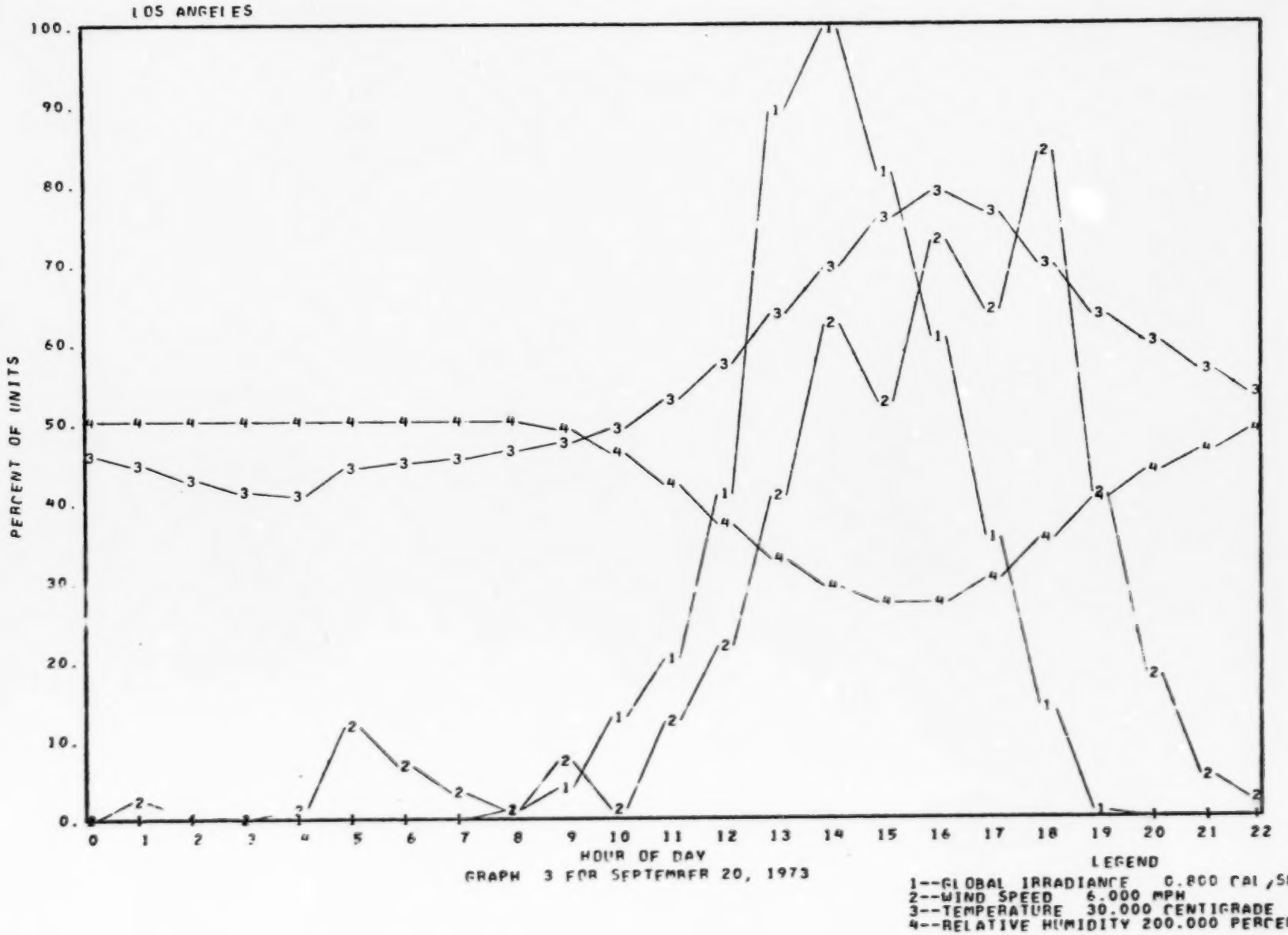
LEGEND

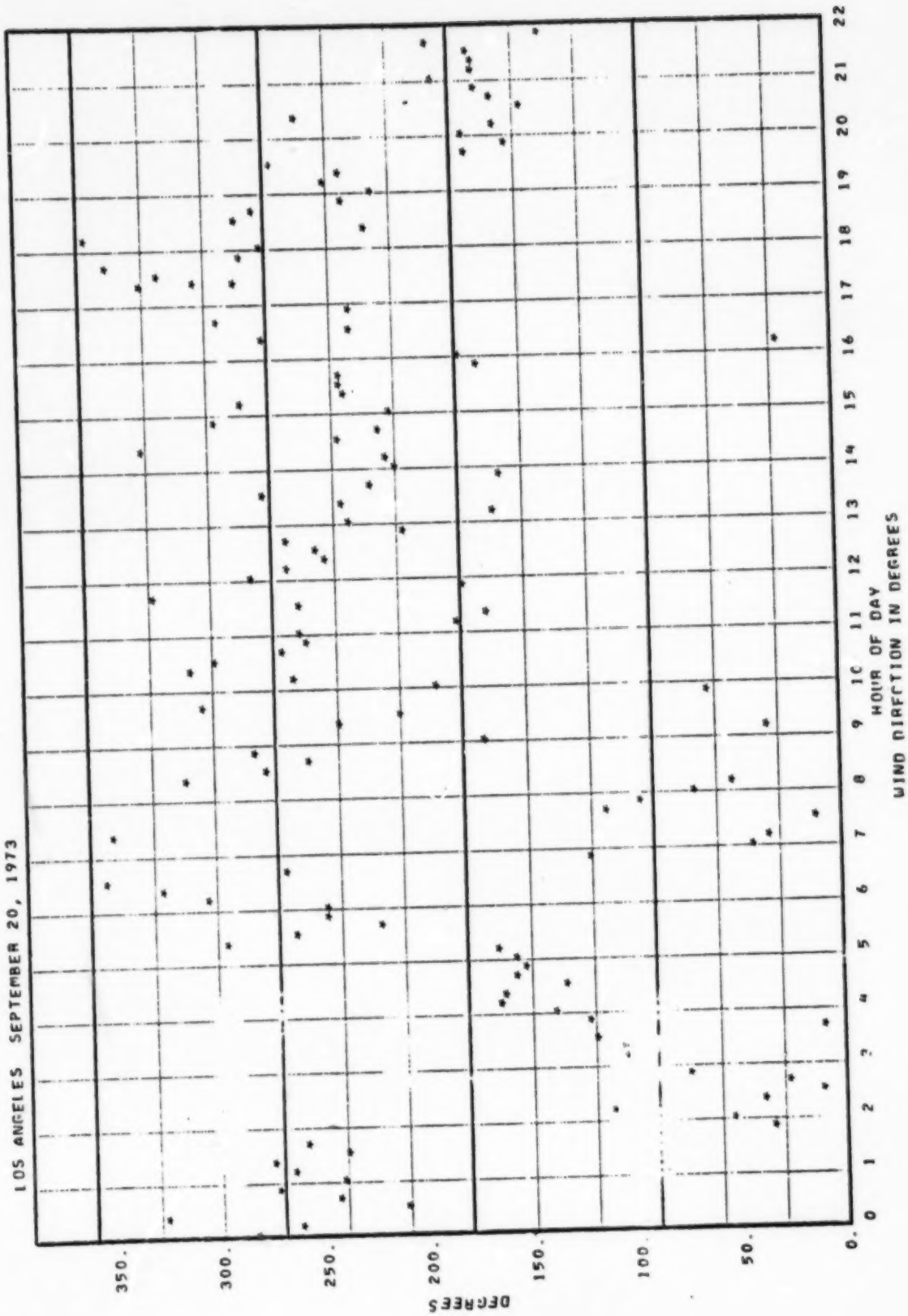
1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MI
2--WIND SPEED 6.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

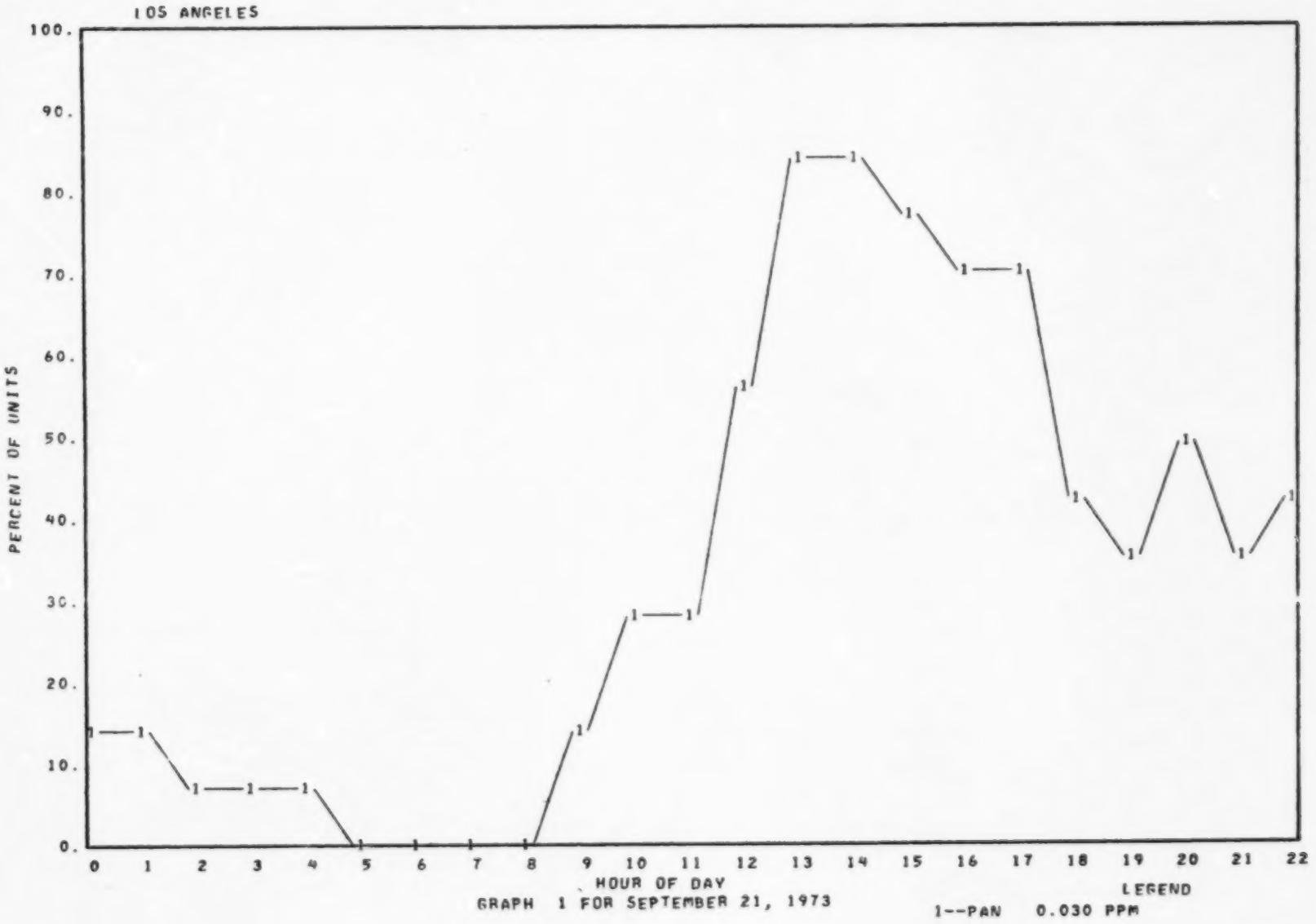

LOS ANGELES SEPTEMBER 19, 1973
WIND DIRECTION IN DEGREES
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY

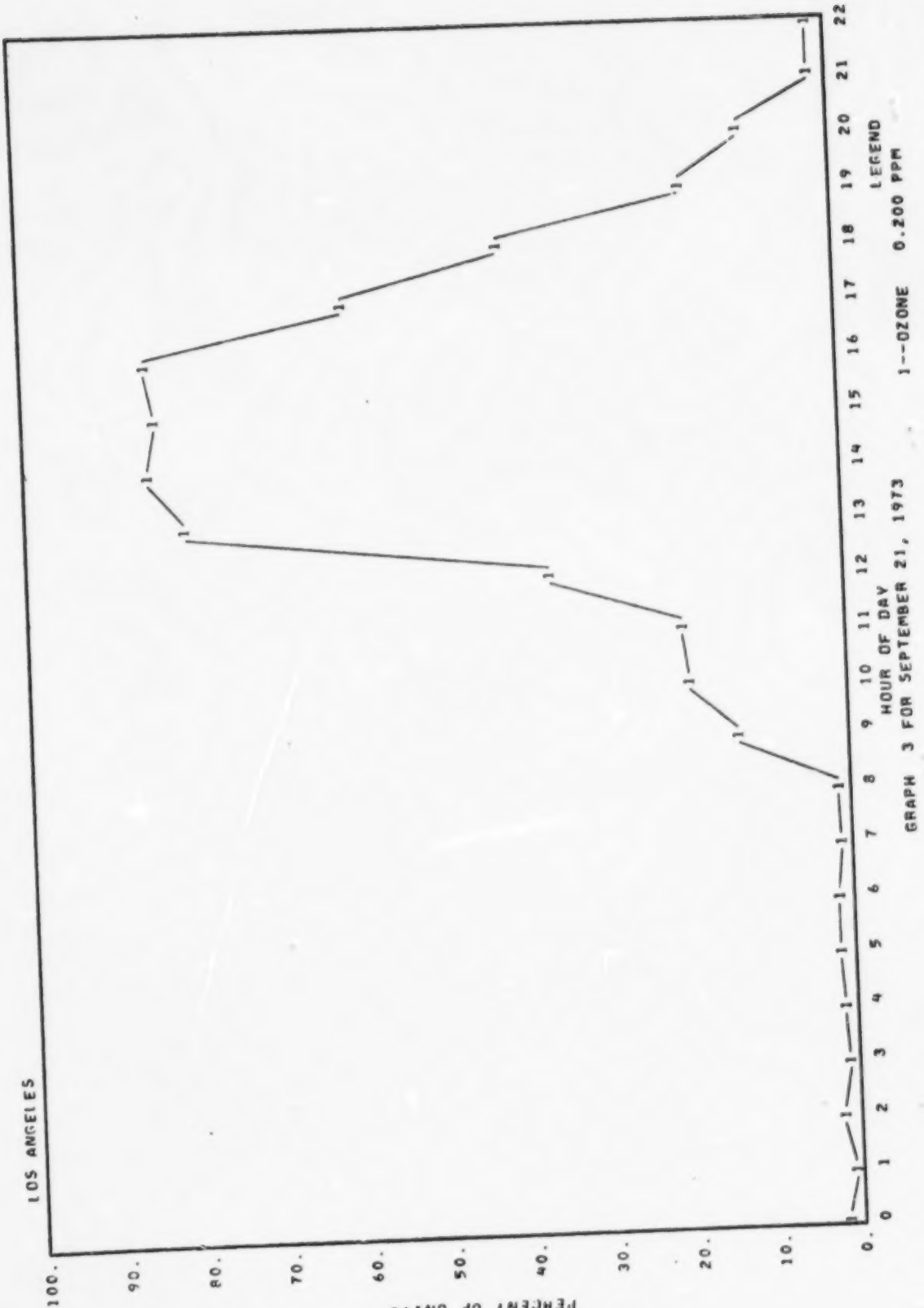

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 20, 1973
LEGEND
1--PAN 0.040 PPM
4--HNO3 0.020 PPM
7--NITROGEN OXIDES 0.200 PPM

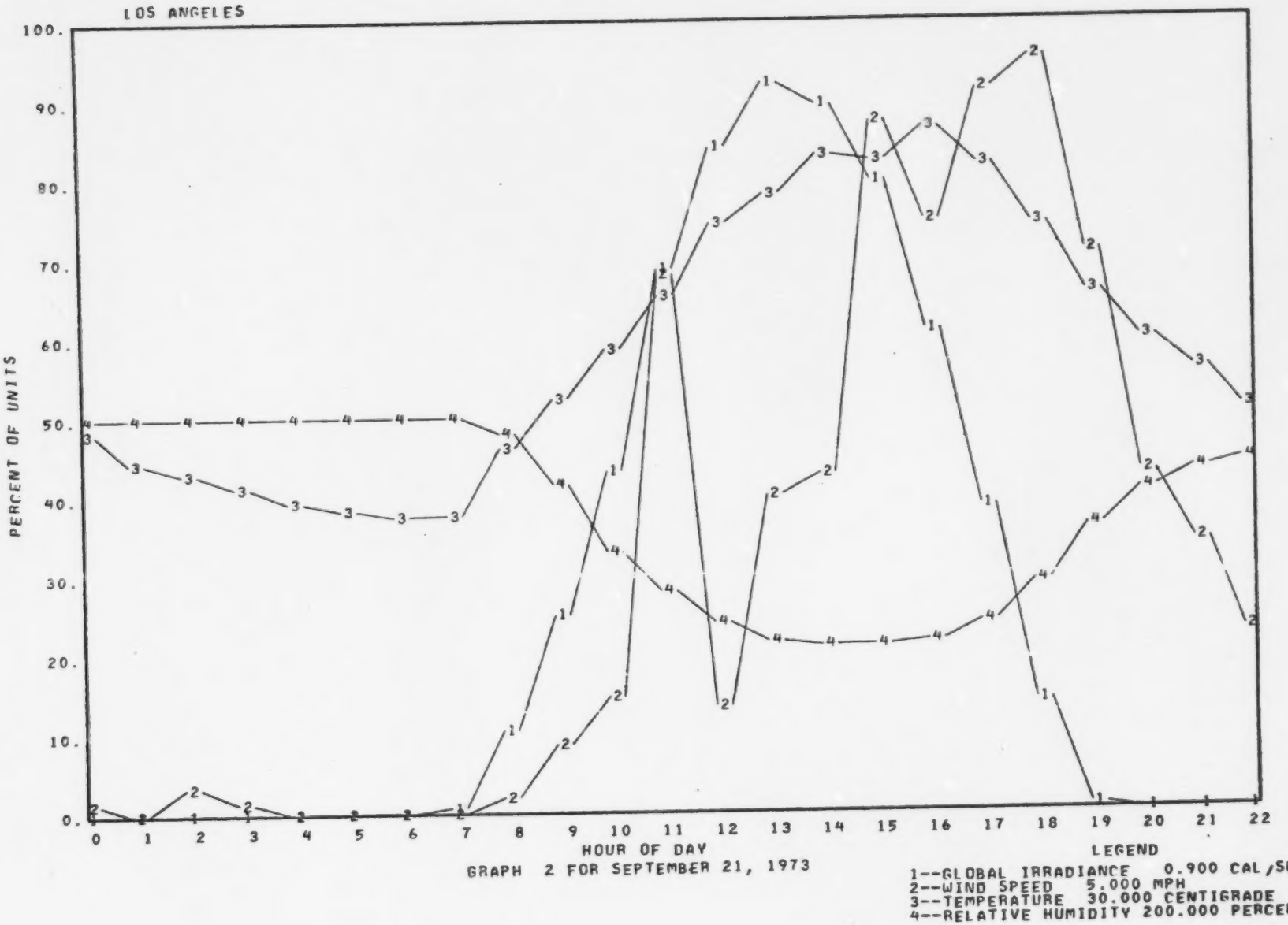

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 20, 1973
LEGEND
1--OZONE 0.300 PPM
2--NITRIC OXIDE 0.200 PPM
3--NITROGEN DIOXIDE 0.200 PPM
4--NITROGEN OXIDES 0.200 PPM


LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 20, 1973
LEGEND
1--GLOBAL IRRADIANCE 0.800 CAL/SQ.CM/M
2--WIND SPEED 6.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT


LOS ANGELES SEPTEMBER 20, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES


LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 21, 1973
LEGEND
1--PAN 0.030 PPM

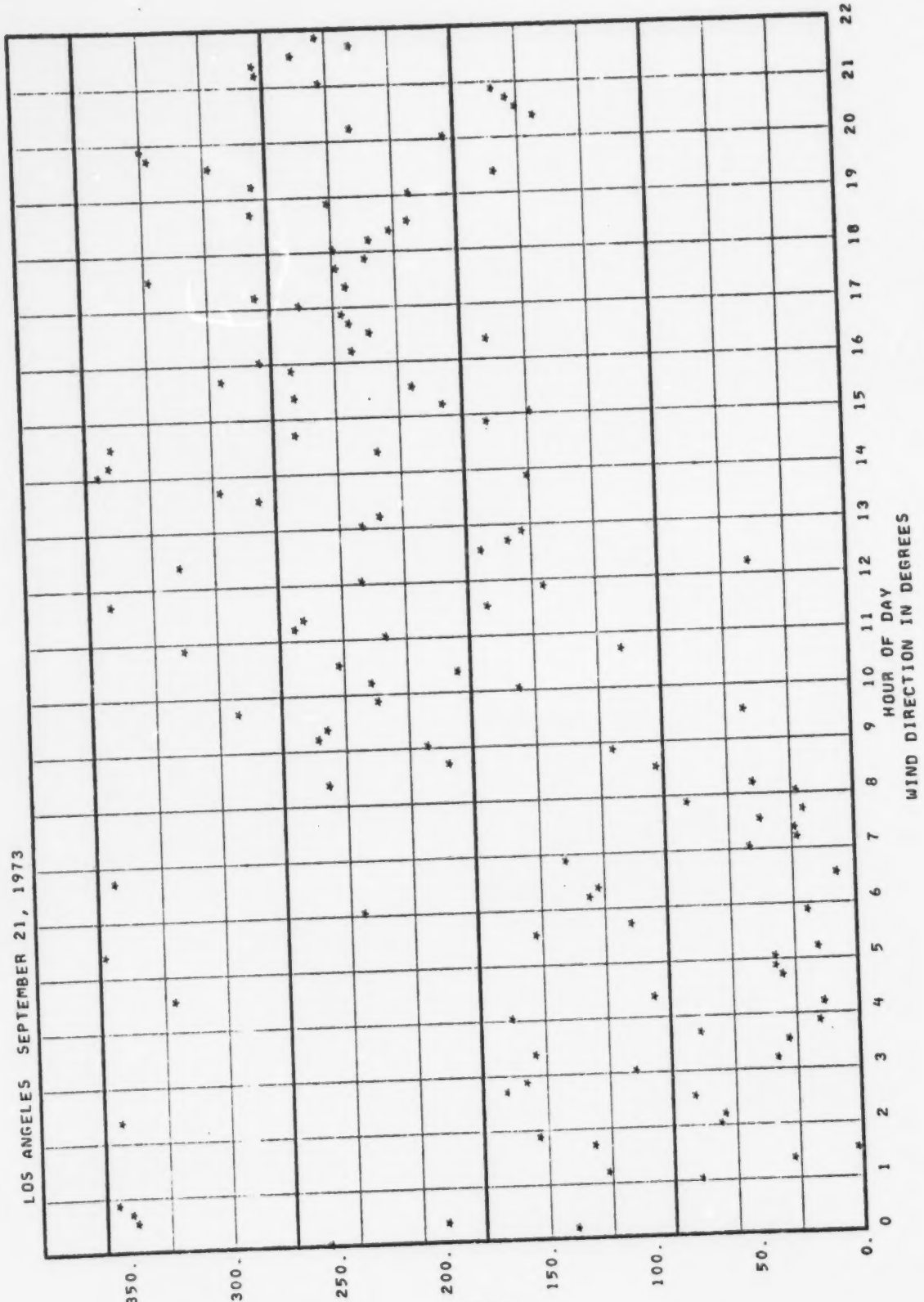

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 21, 1973
LEGEND
1--OZONE 0.200 PPM

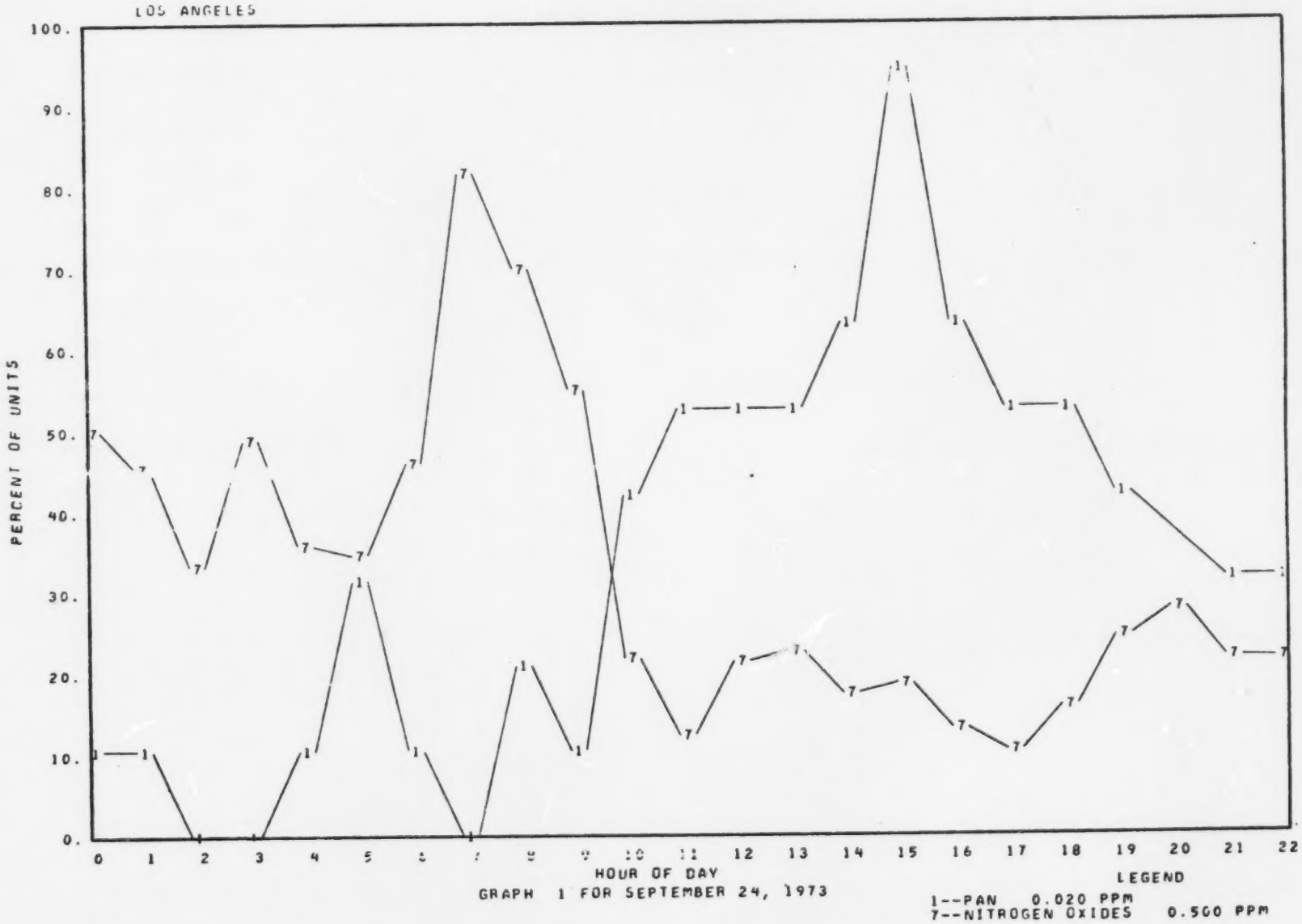


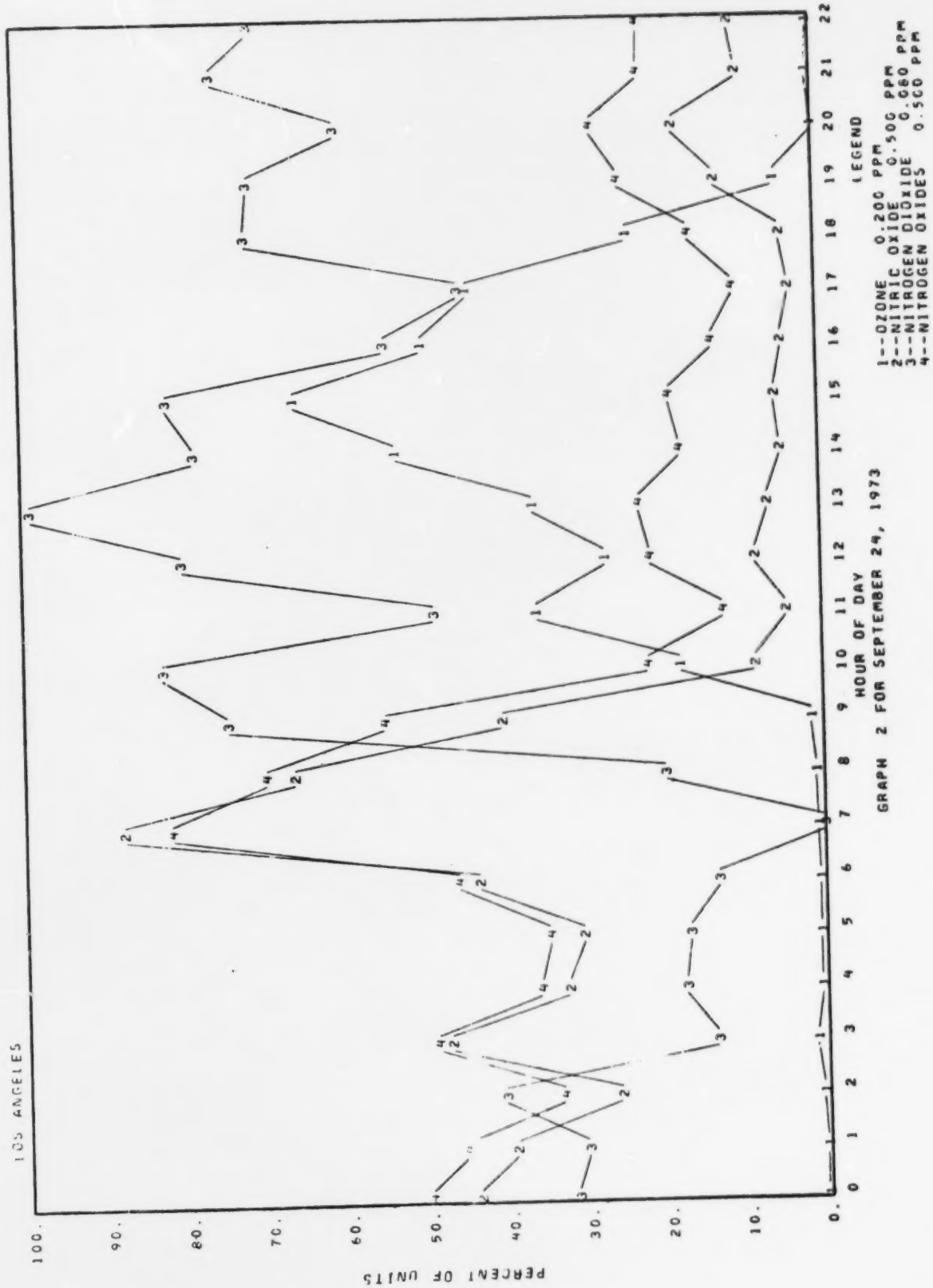
GRAPH 2 FOR SEPTEMBER 21, 1973

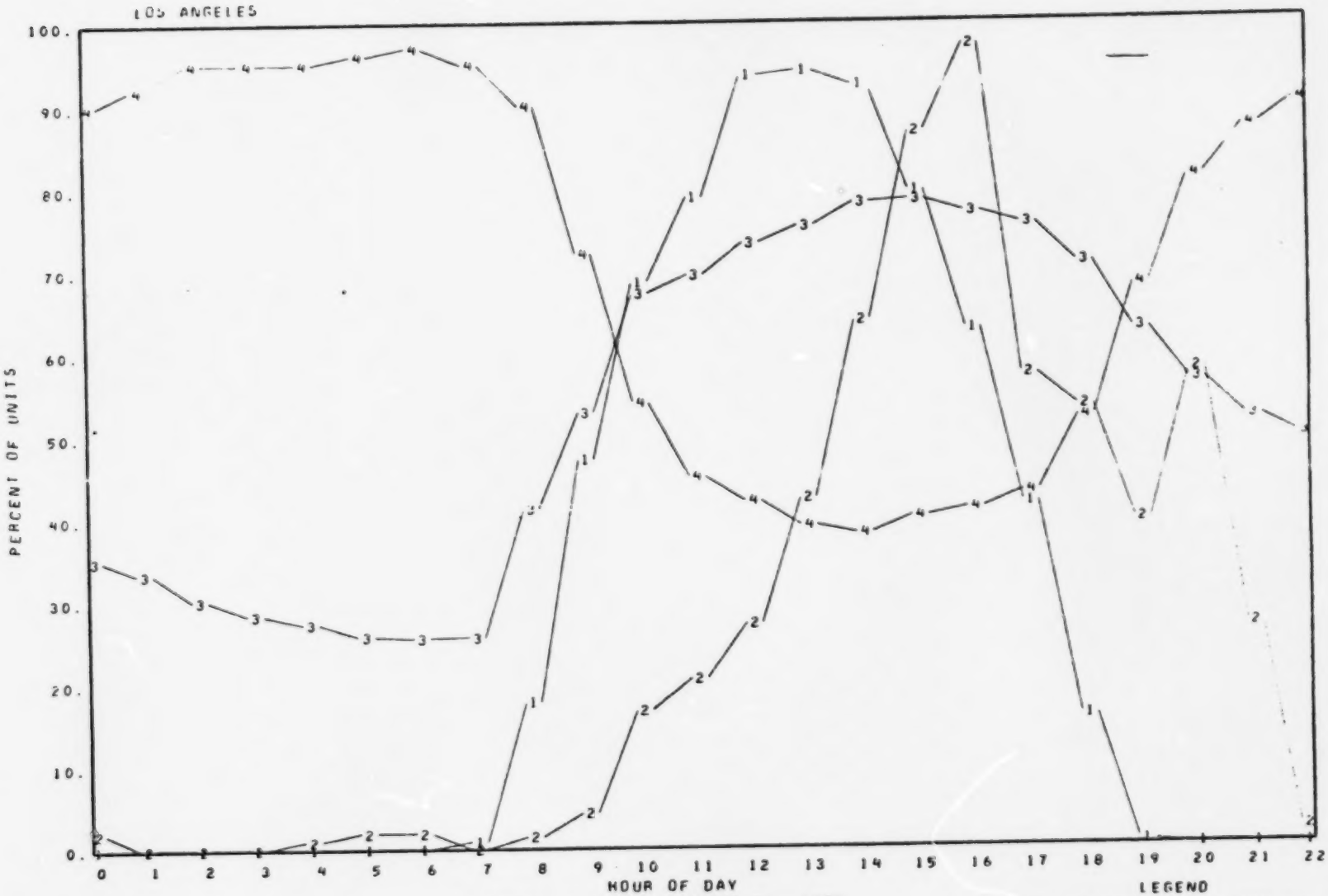
LEGEND

1--GLOBAL IRRADIANCE 0.900 CAL/SQ.CM/MI
2--WIND SPEED 5.000 MPH
3--TEMPERATURE 30.000 CENTIGRADE
4--RELATIVE HUMIDITY 200.000 PERCENT

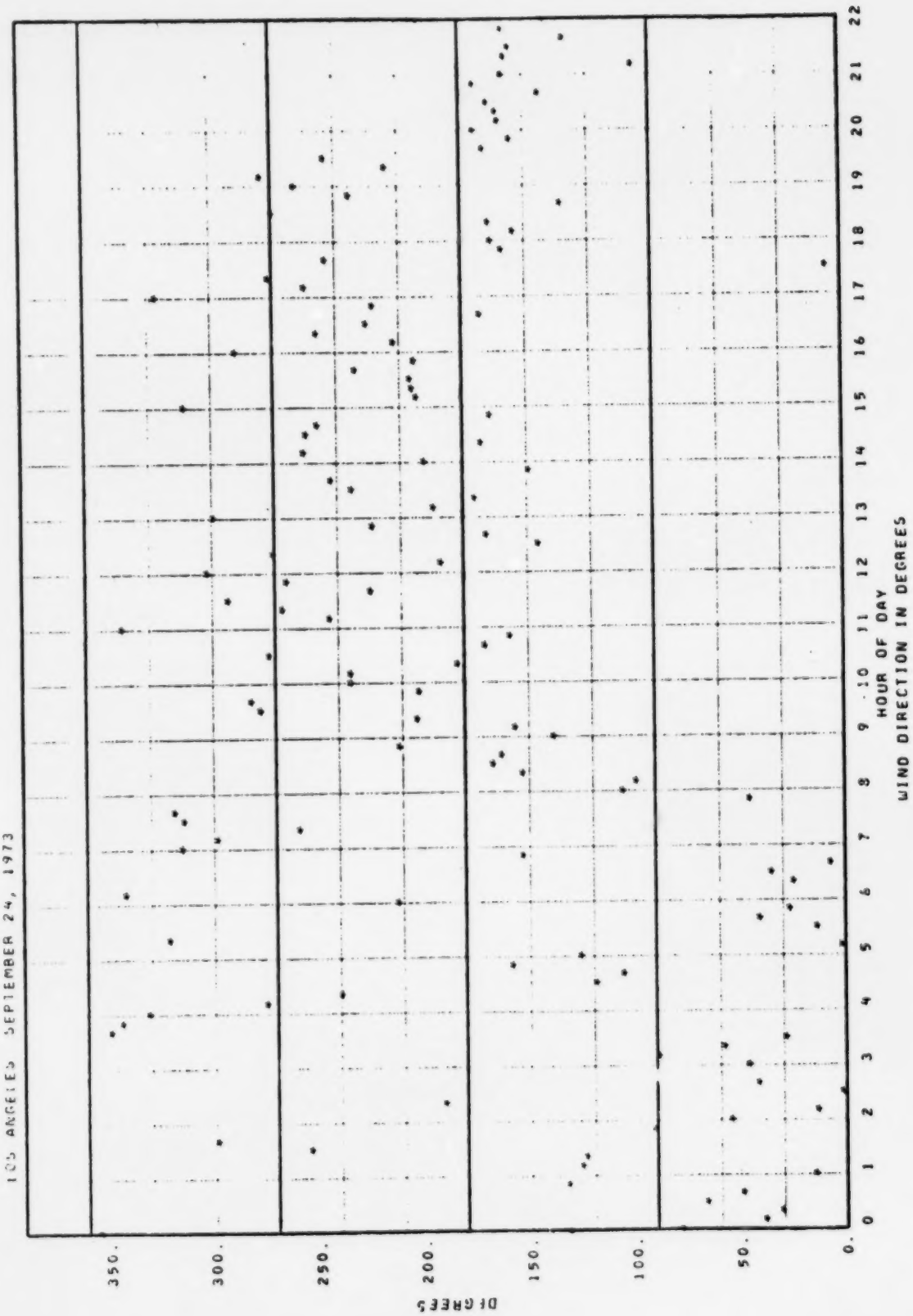

LOS ANGELES SEPTEMBER 21, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

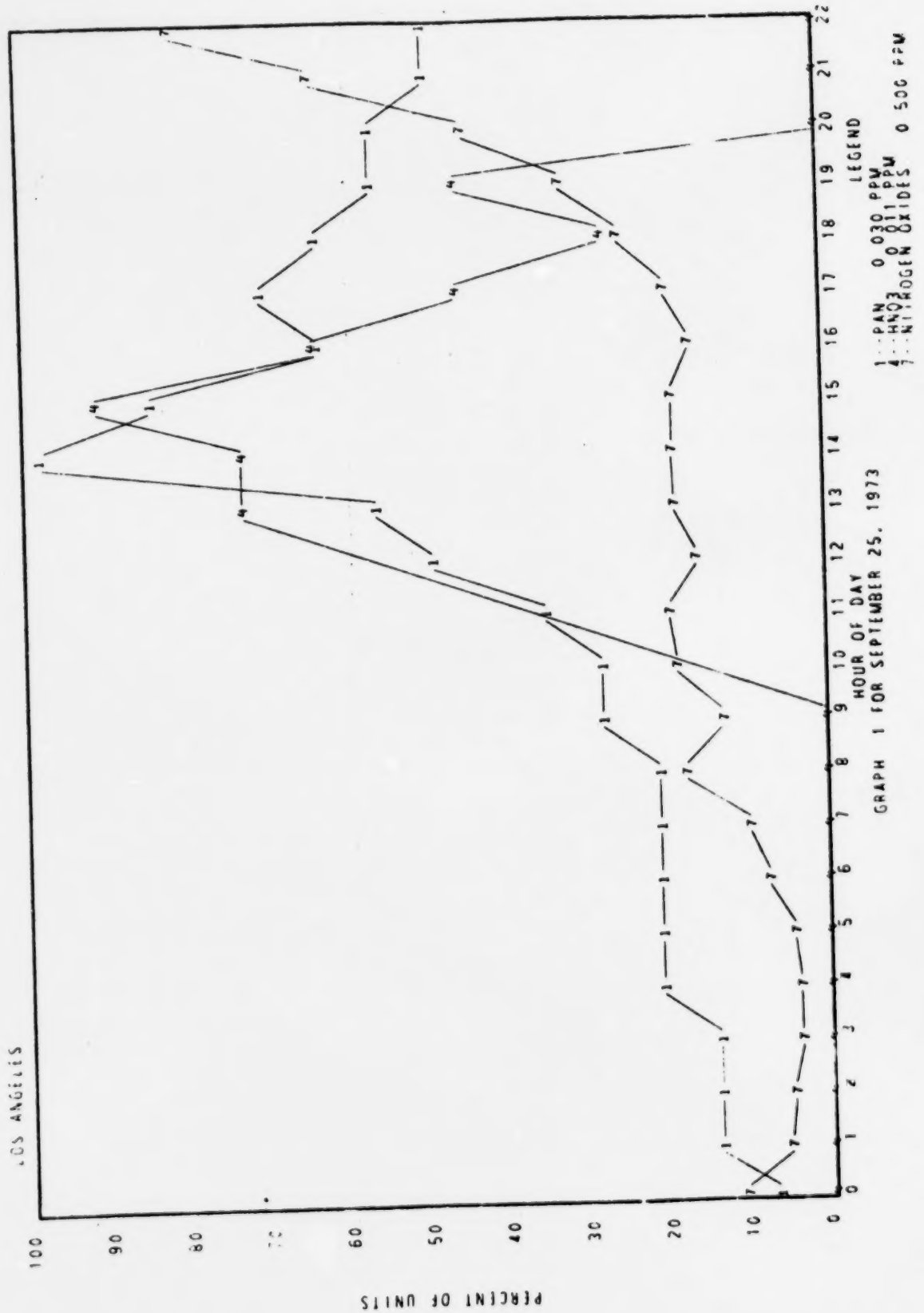

LOS ANGELES
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
PERCENT OF UNITS
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 24, 1973
LEGEND
1--PAN 0.020 PPM
7--NITROGEN OXIDES 0.500 PPM

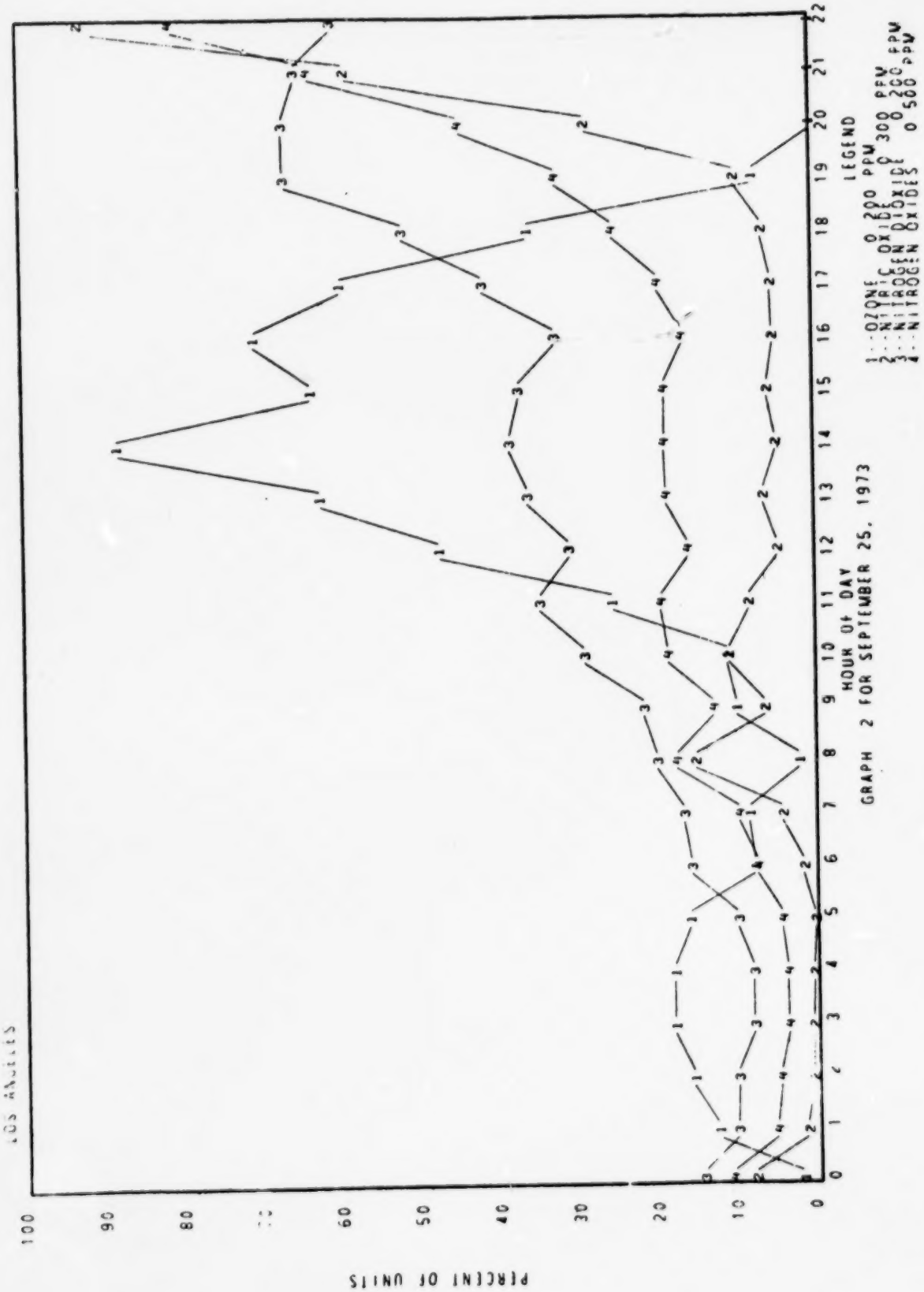

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 24, 1973
LEGEND
1--OZONE 0.200 PPM
2--NITRIC OXIDE 0.500 PPM
3--NITROGEN DIOXIDE 0.060 PPM
4--NITROGEN OXIDES 0.500 PPM

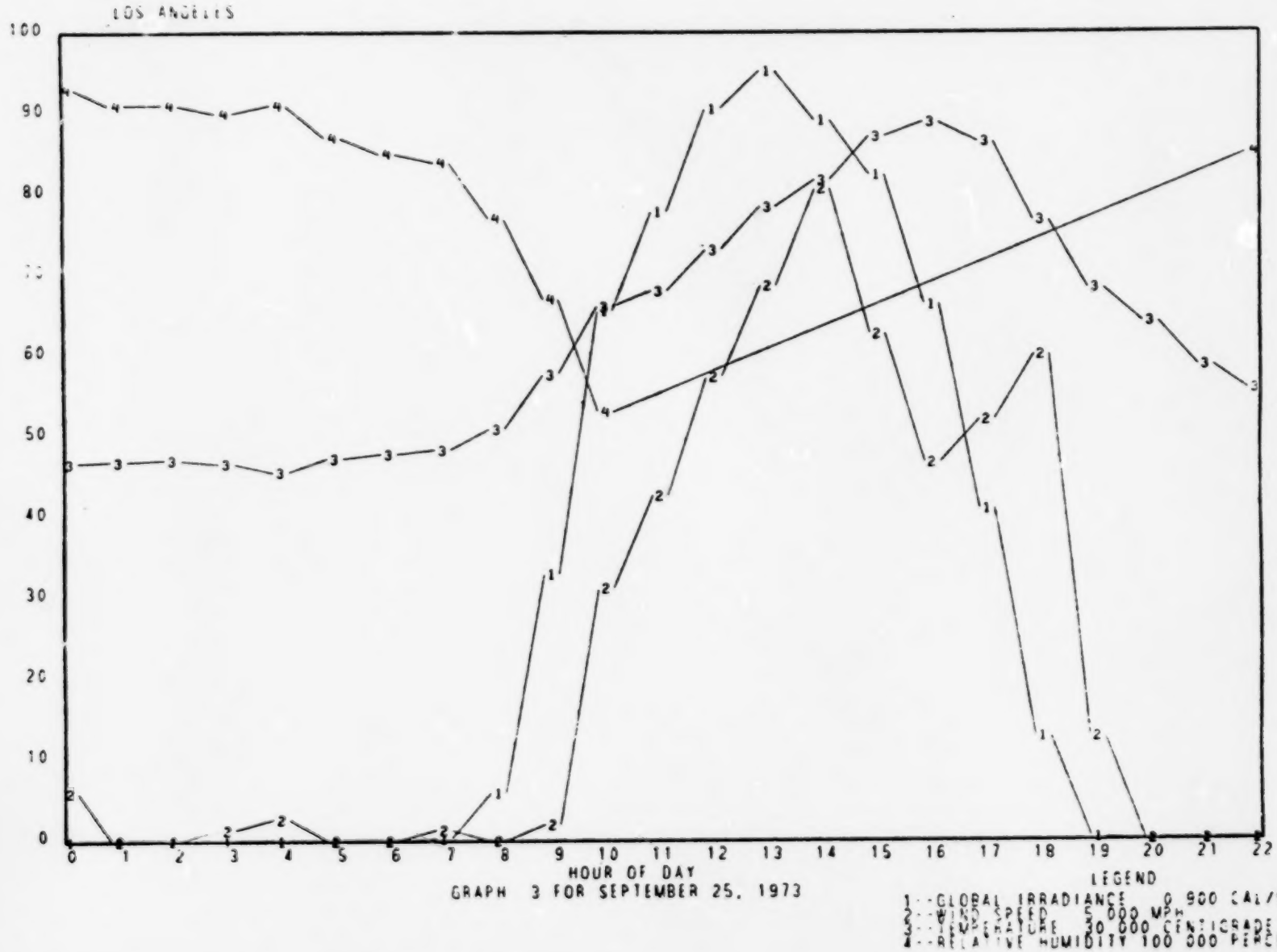


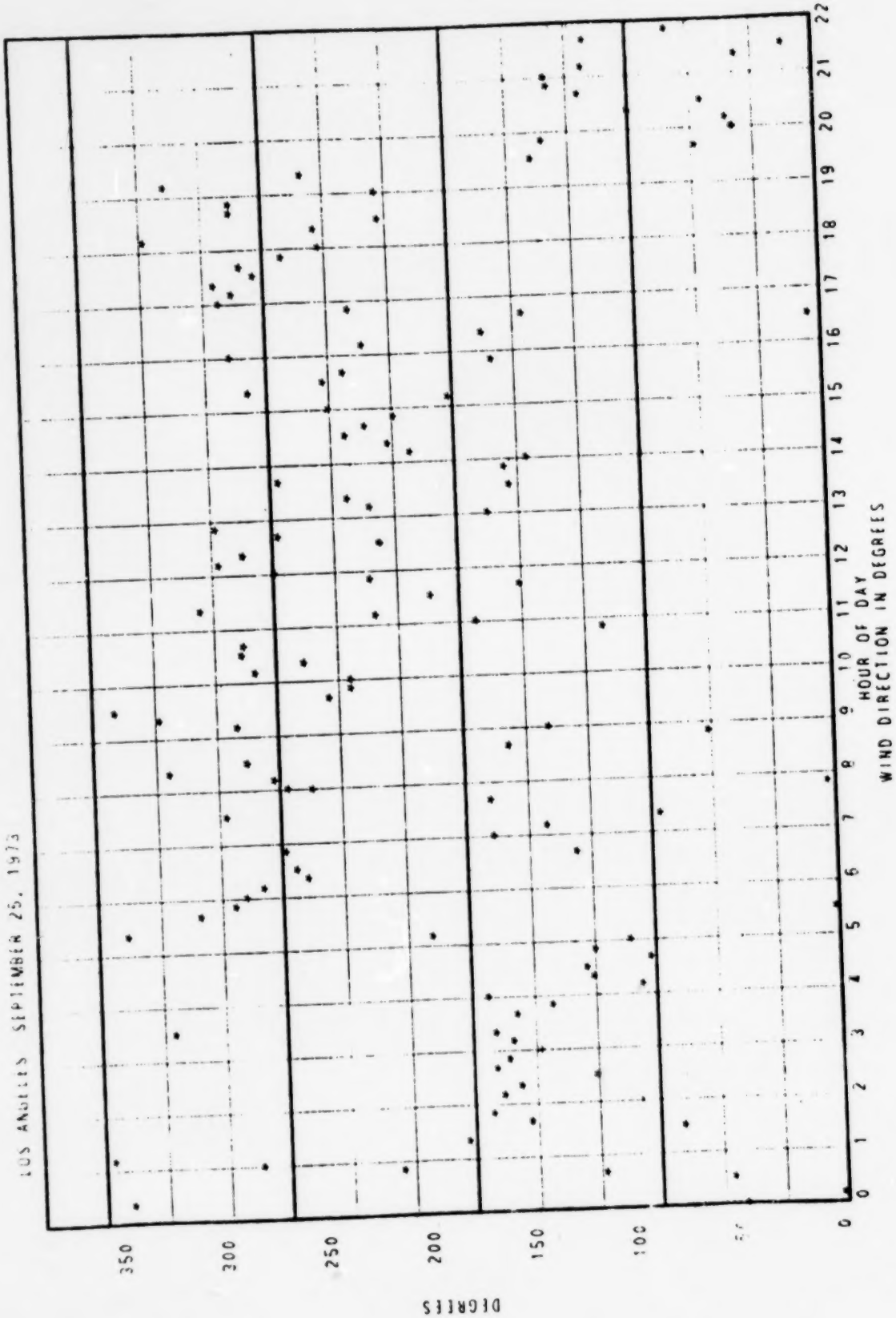
GRAPH 3 FOR SEPTEMBER 24, 1973

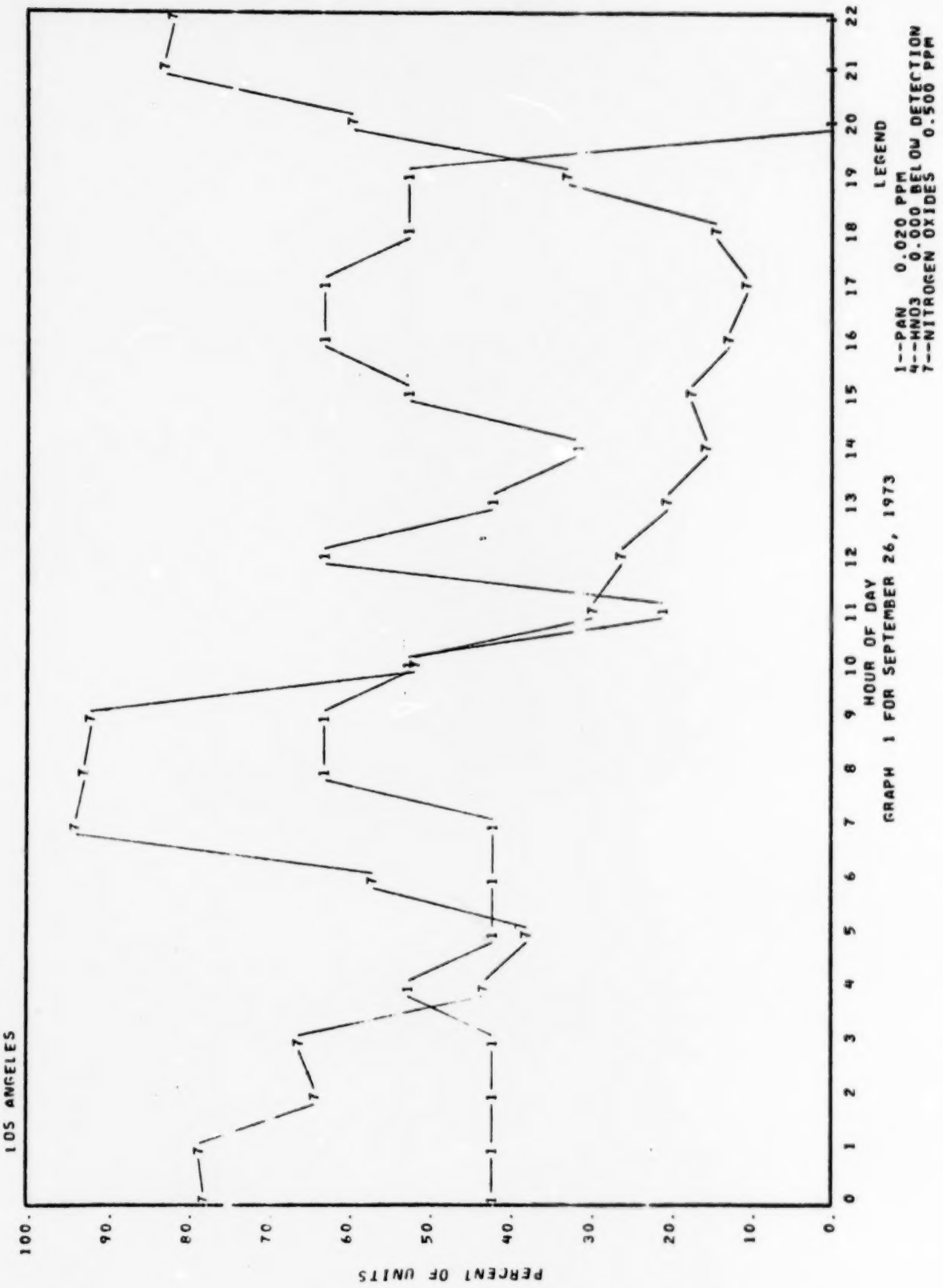

LOS ANGELES SEPTEMBER 24, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES

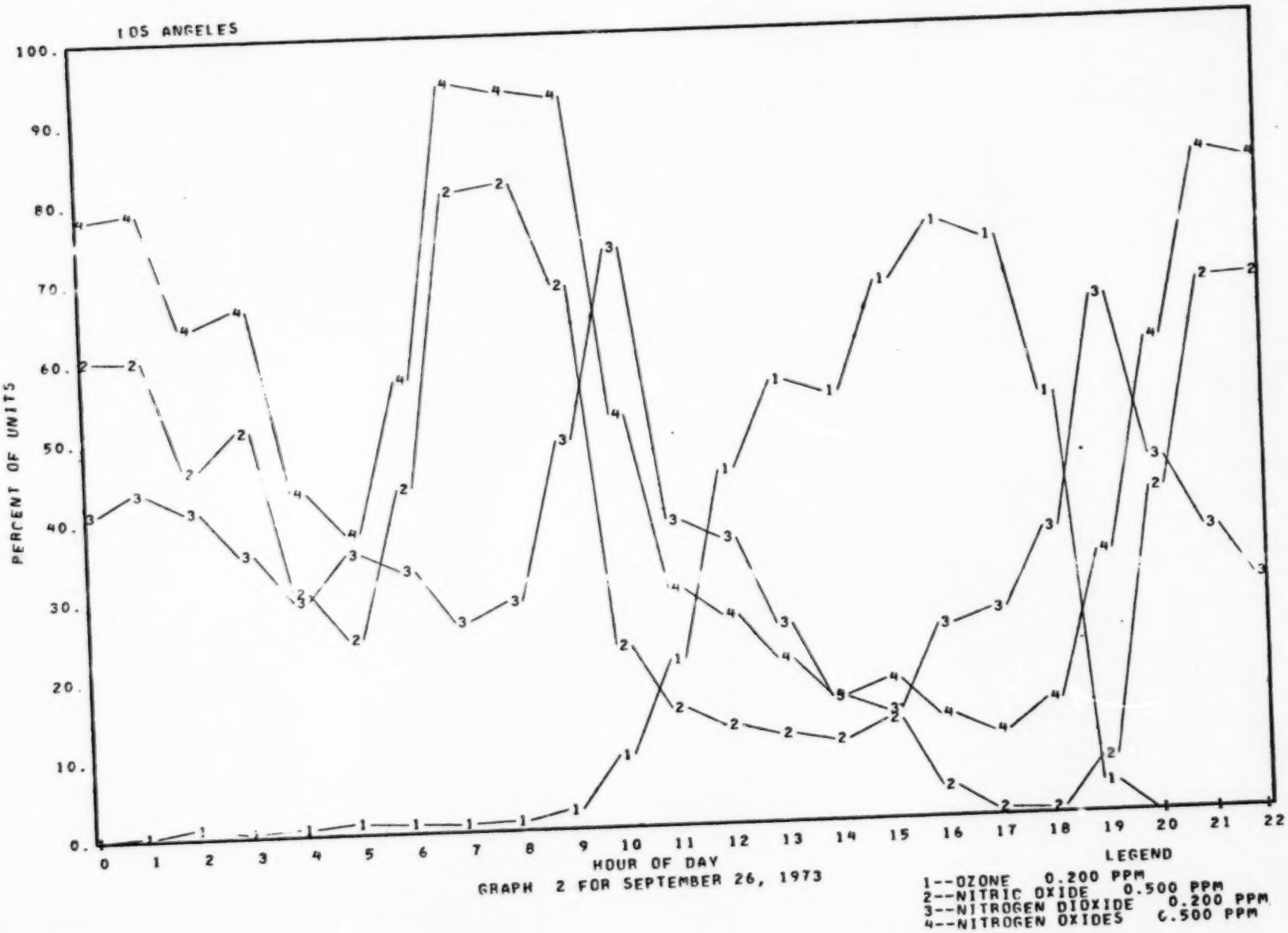

LOS ANGELES
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 25, 1973
LEGEND
1 : PAN 0.030 PPM
4 : HNO3 0.011 PPM
7 : NITROGEN OXIDES 0.500 PPM


LOS ANGELES
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 2 FOR SEPTEMBER 25, 1973
LEGEND
1 - OZONE 0 200 PPM
2 - NITRIC OXIDE 0 300 PPM
3 - NITROGEN DIOXIDE 0 200 PPM
4 - NITROGEN OXIDES 0 500 PPM

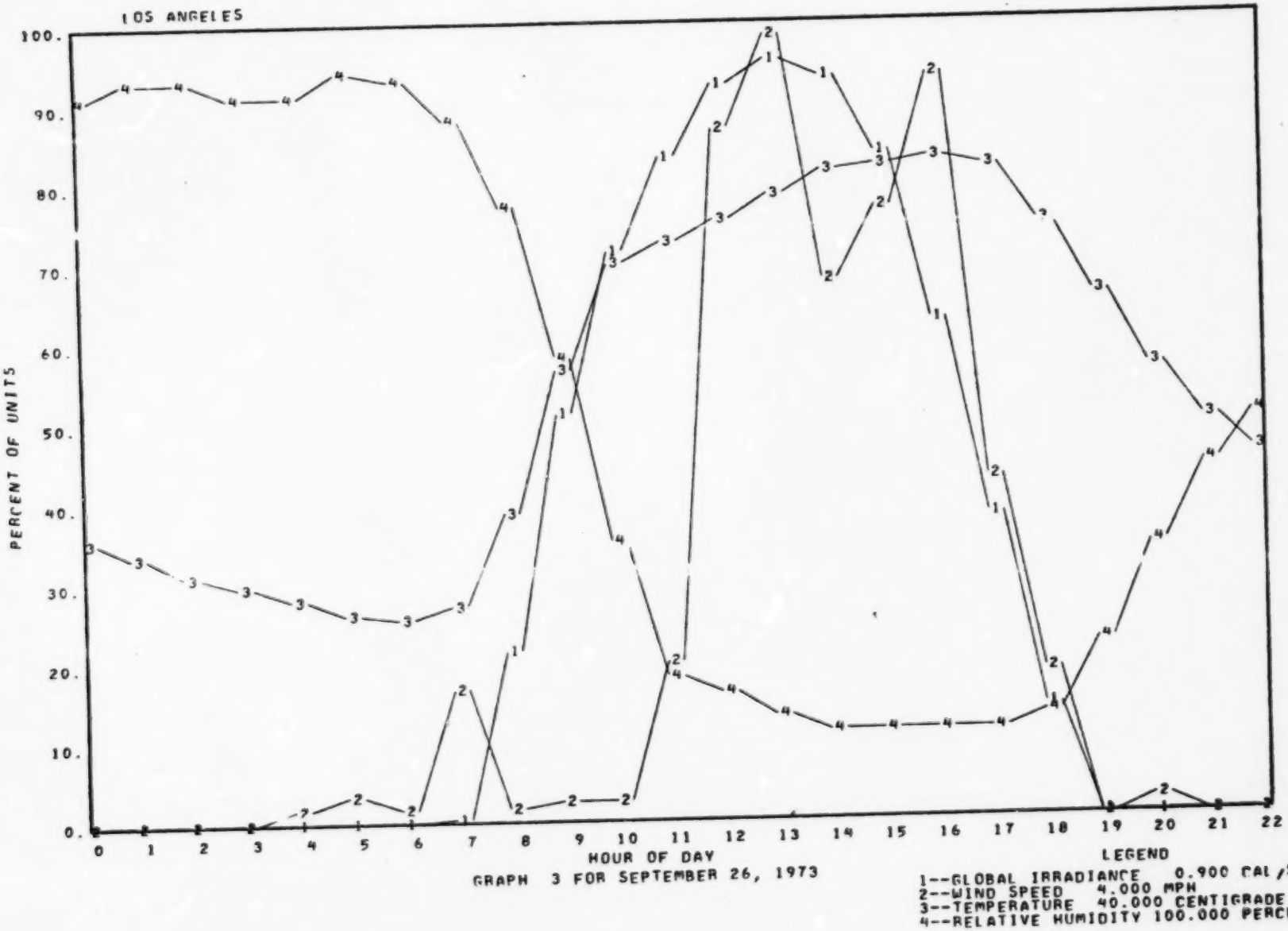

LOS ANGELES
PERCENT OF UNITS
HOUR OF DAY
GRAPH 3 FOR SEPTEMBER 25, 1973
LEGEND
1--GLOBAL IRRADIANCE 0 900 CAL/SQ CM/MIN
2--WIND SPEED 5 000 MPH
3--TEMPERATURE 30 000 CENTIGRADE
4--RELATIVE HUMIDITY 100 000 PERCENT


LOS ANGELES SEPTEMBER 25, 1973
WIND DIRECTION IN DEGREES
DEGREES
350
300
250
200
150
100
0
HOUR OF DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

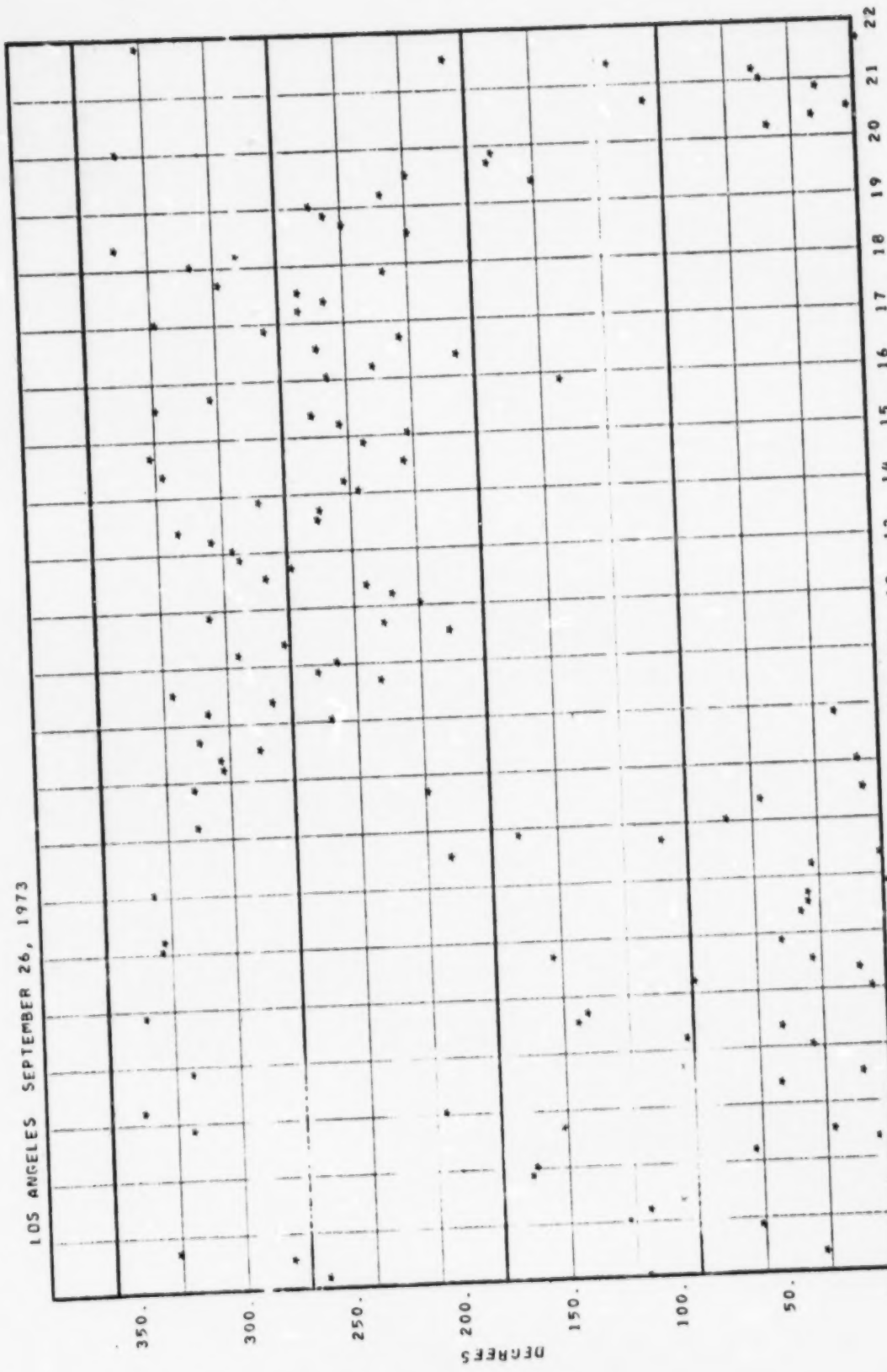

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 26, 1973
LEGEND
1--PAN 0.020 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.500 PPM

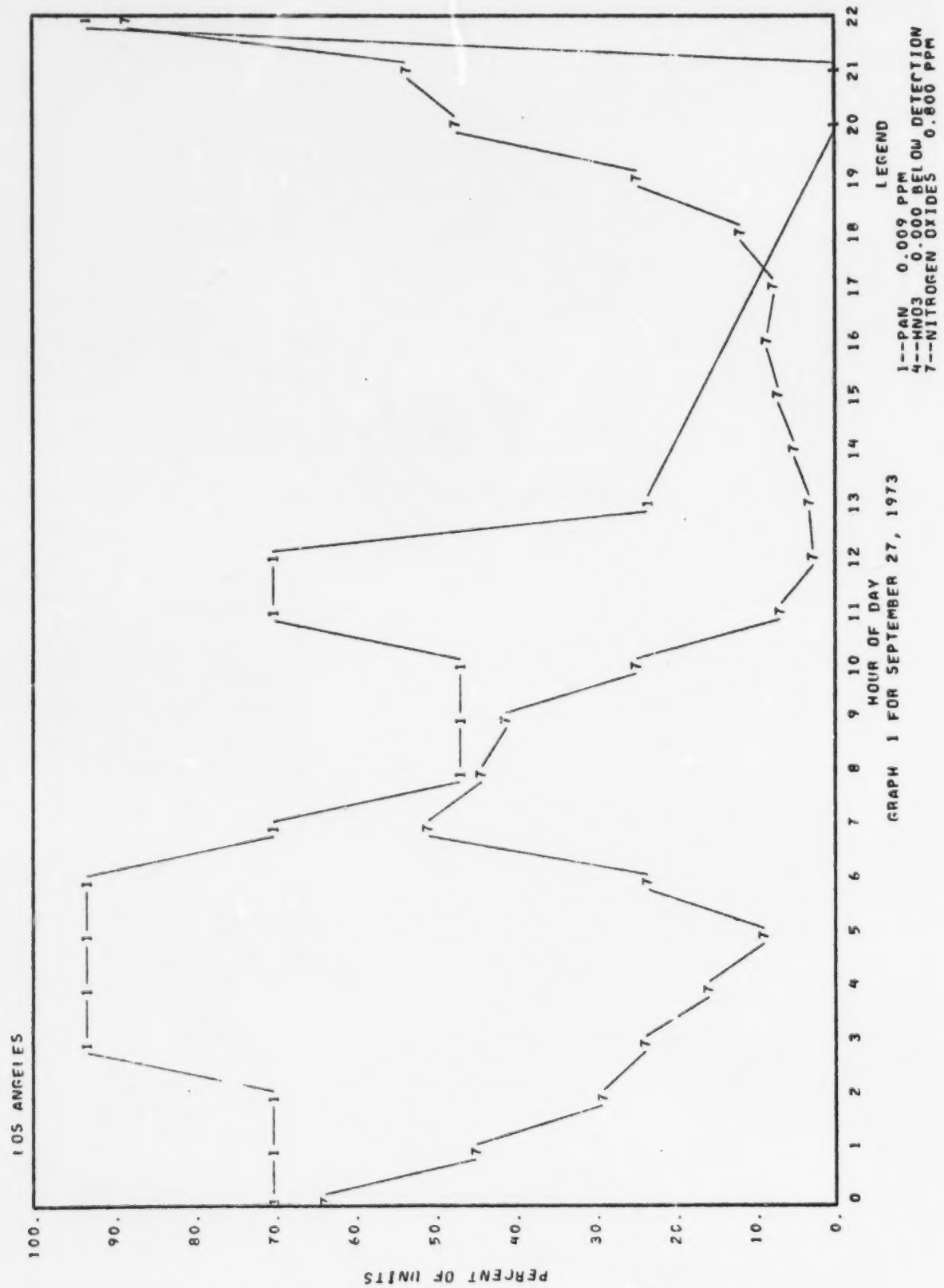


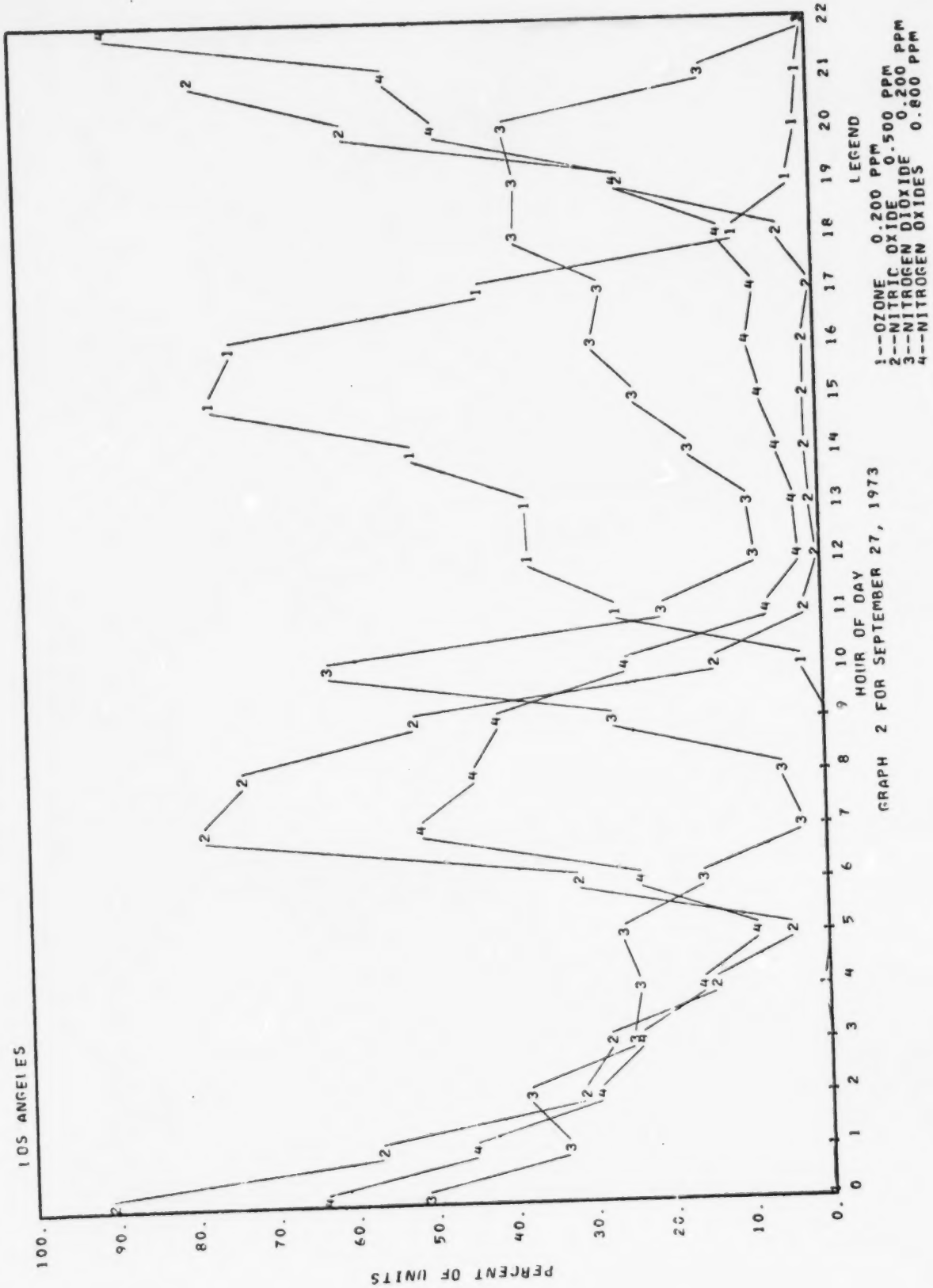
GRAPH 2 FOR SEPTEMBER 26, 1973



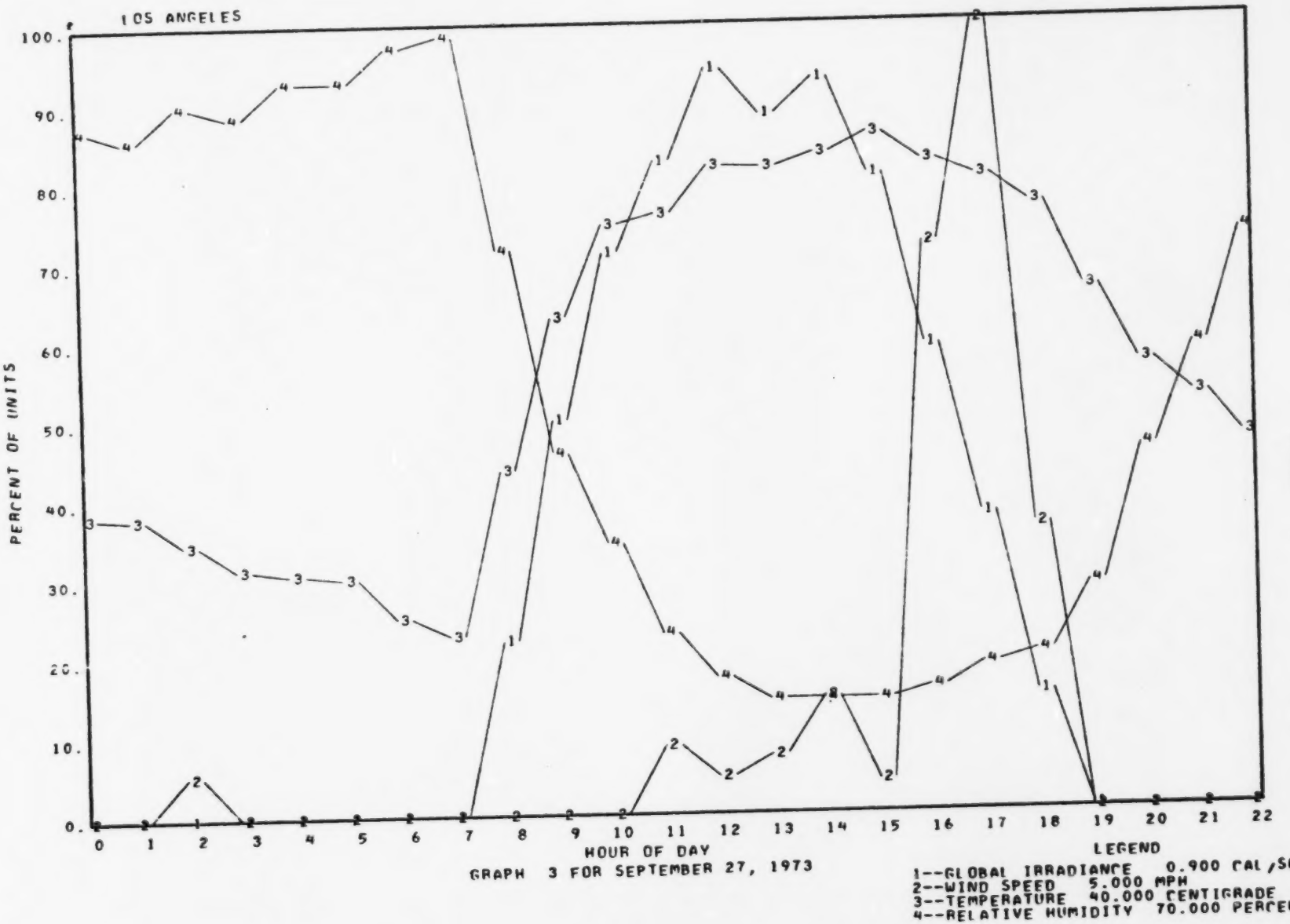
GRAPH 3 FOR SEPTEMBER 26, 1973


LOS ANGELES SEPTEMBER 26, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

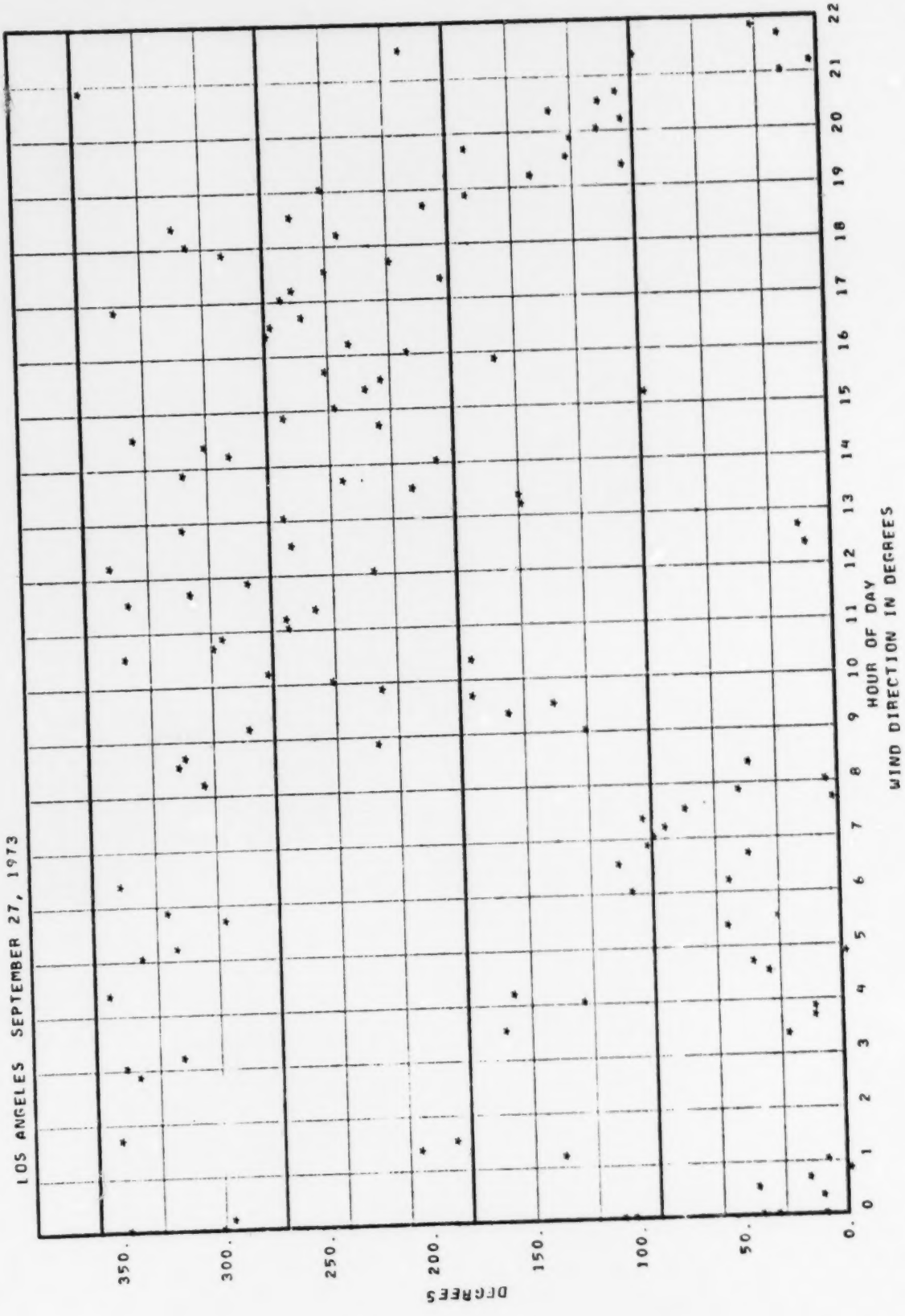

LOS ANGELES
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
GRAPH 1 FOR SEPTEMBER 27, 1973
LEGEND
1--PAN 0.009 PPM
4--HNO3 0.000 BELOW DETECTION
7--NITROGEN OXIDES 0.800 PPM

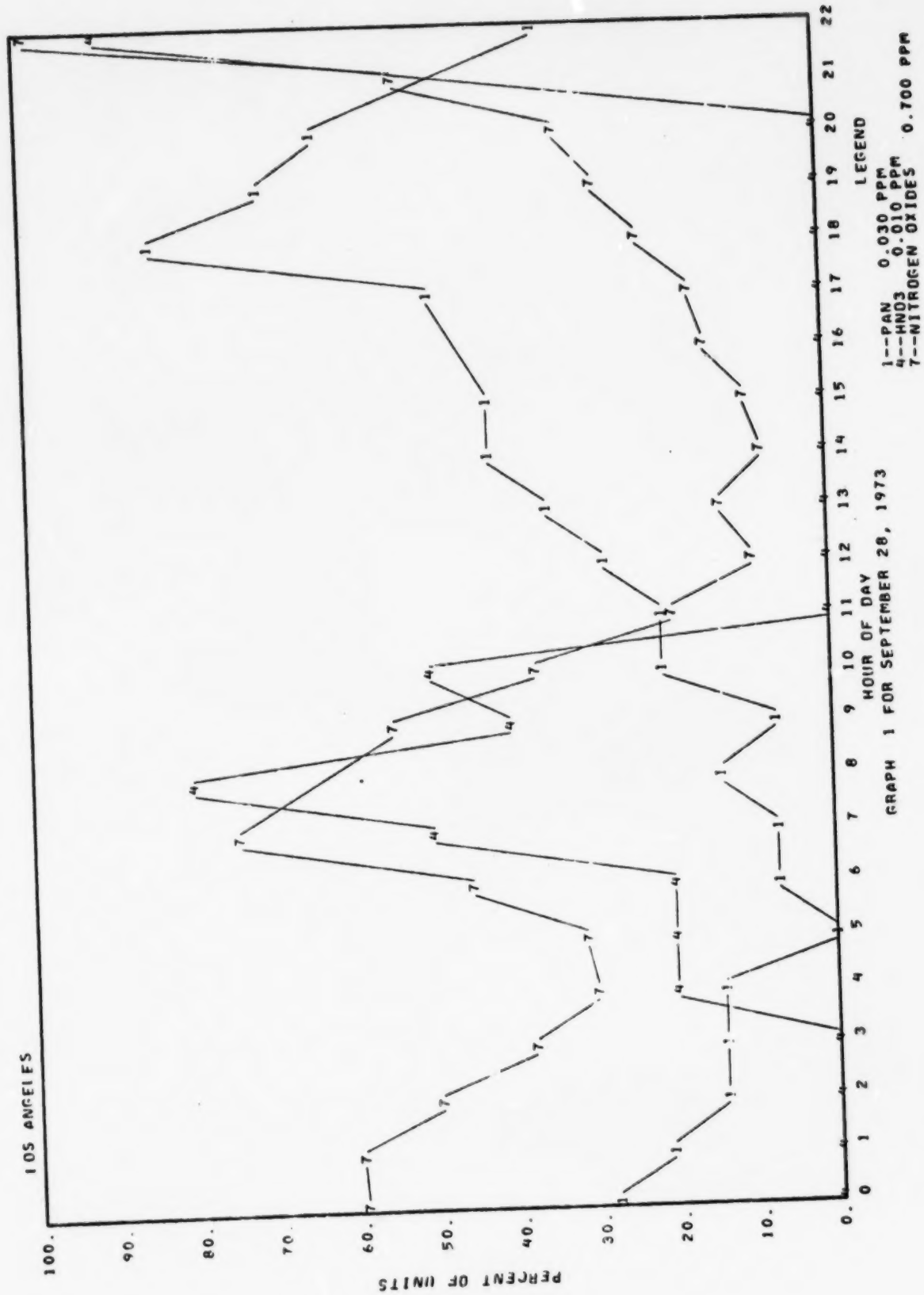


GRAPH 2 FOR SEPTEMBER 27, 1973

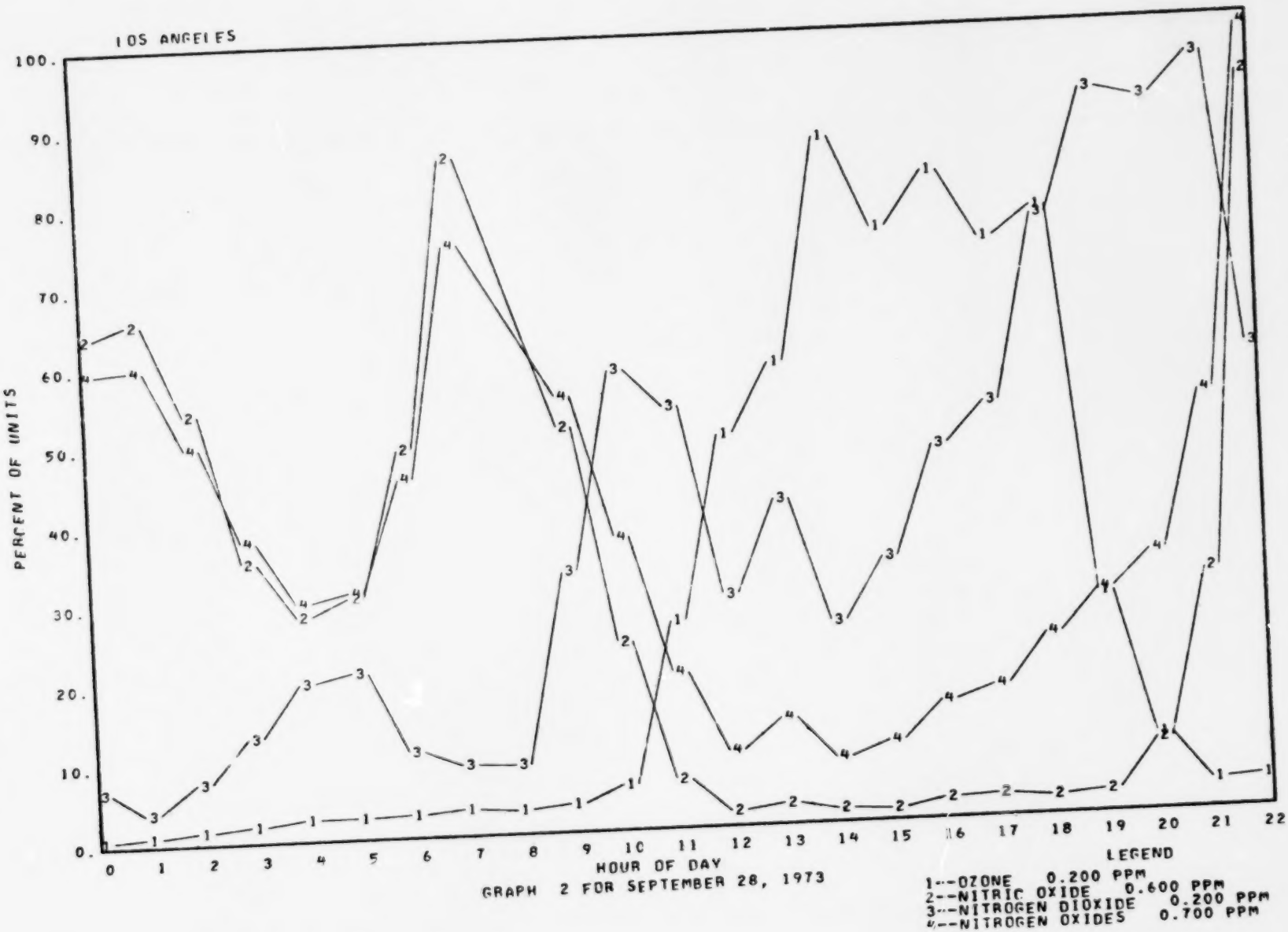


GRAPH 3 FOR SEPTEMBER 27, 1973

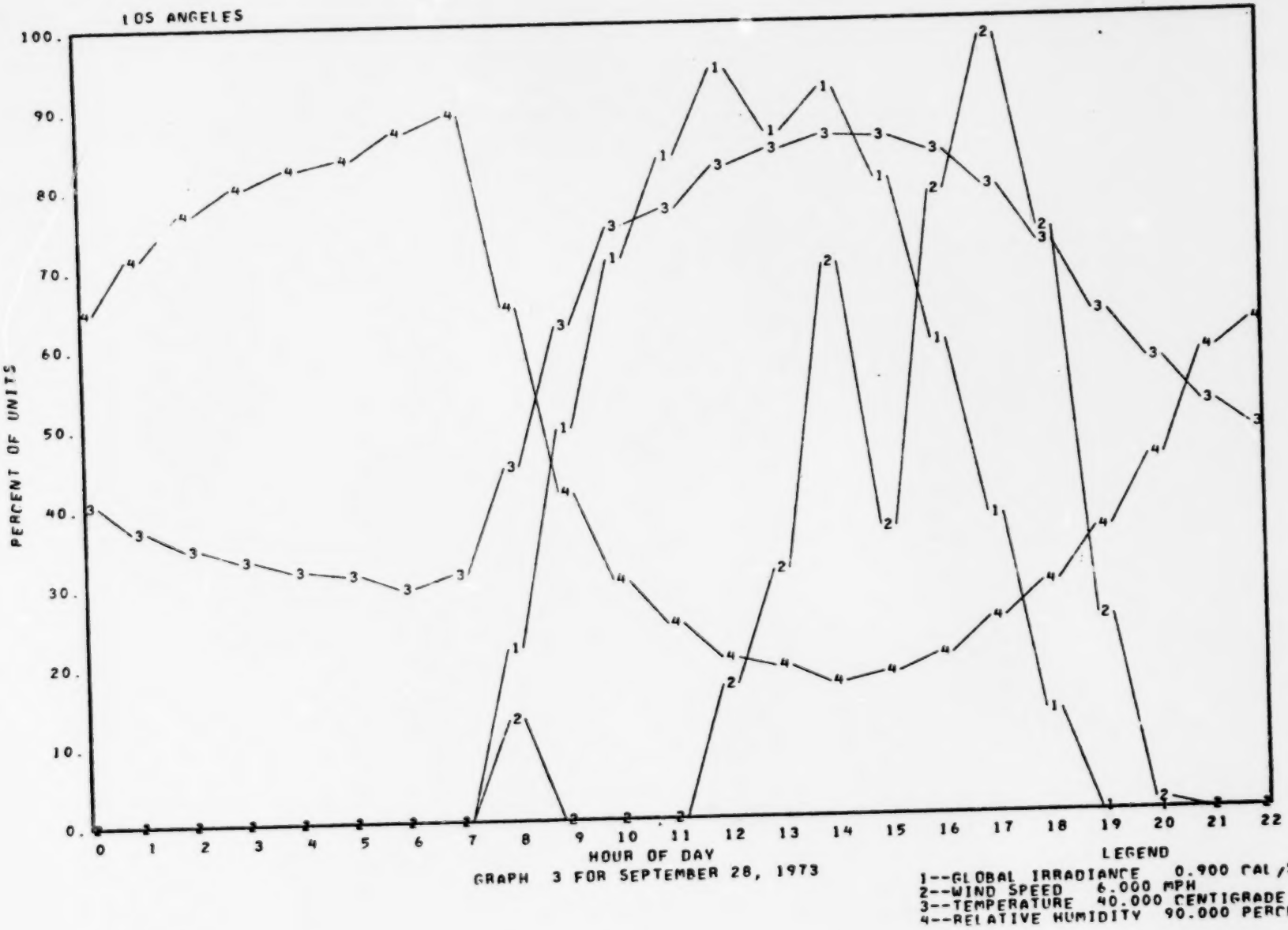

LOS ANGELES SEPTEMBER 27, 1973
DEGREES
350.
300.
250.
200.
150.
100.
50.
0.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
HOUR OF DAY
WIND DIRECTION IN DEGREES



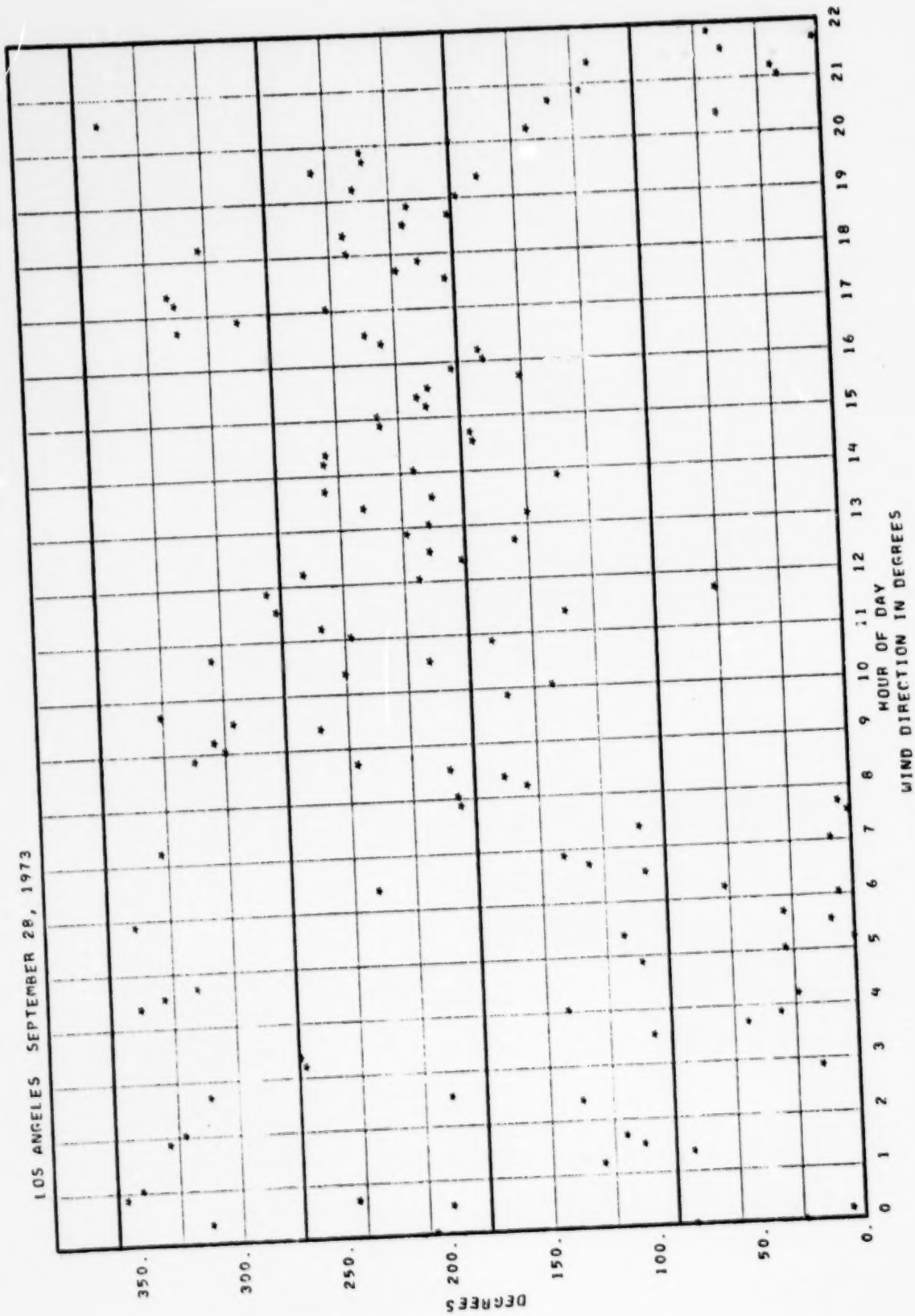
GRAPH 1 FOR SEPTEMBER 28, 1973



GRAPH 2 FOR SEPTEMBER 28, 1973



GRAPH 3 FOR SEPTEMBER 28, 1973


LOS ANGELES SEPTEMBER 28, 1973
WIND DIRECTION IN DEGREES
HOUR OF DAY
DEGREES
0.
50.
100.
150.
200.
250.
300.
350.
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

JOB NUMBER =
PROGRAM =CVAMAD1
DATE: 09/24/73

CARBON MONOXIDE / HOURLY AVERAGE / IN PPM

STATION 60 — 8 / 1973

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
	HOUR PST																												
01	3	3	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3.2	24	4	08	5
02	4	4	4	4	4	3	4	4	3	3	4	4	4	4	3	3	3	3	4	5	7	7	7	5	4.2	24	7	21	7
03	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	3	3	3	3	4	5	3.5	24	5	23	5
04*	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3.3	24	4	00	5
05*	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2.1	24	3	01	3
06	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2.3	24	3	11	4
07	2	2	1	2	2	2	2	2	2	2			4	5	4	4	4	4	4	3	4	4	4	4	3.8	22	5	13	5
08	3	3	3	3	3	3	3	4	4	4	4	4	4	5	4	4	3	3	4	3	3	3	3	3	3.4	24	4	10	8
09	3	3	3	3	3	4	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3.0	24	4	06	5
10	3	2	2	2	2	2	2	2	2	3	3	3	4	3	3	4	3	3	4	4	4	4	4	4	3.0	24	4	16	5
11*	4	4	4	4	3	3	2	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	3.8	24	4	14	5
12*	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	2	3.5	24	4	07	5
13	2	2	2	2	2	3	3	3	4	3	3	4	5	4	3	3	3	3	3	3	3	3	2	2	2.9	24	5	12	6
14	2	3	2	2	2	2	3	4	4	4	4	3	3	3	3	3	3	3	4	4	4	3	3	3	3.1	24	4	07	4
15	3	3	2	2	2	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3.2	24	4	07	6
16	4	4	3	4	4	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4.0	24	5	07	6
17	3	3	3	3	3	3	3	4	4	4	5			5	4	4	4	4	4	4	5	5	5	5	4.0	22	5	13	6
18*	5	5	5	5	5	6	6	7	6	5	4	4	4	4	4	3	3	3	3	3	4	4	4	5	4.5	24	7	06	7
19*	6	6	6	6	5	5	5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3.9	24	6	00	6
20	3	3	2	2	3	3	2	2	3	4	4	2	3	3	3	3	3	3	3	3	3	4	4	3	3.0	24	4	10	5
21	3	3	3	3	3	4	4	4	3	3	3	4	3	3	4	3	3	4	4	4	3	4	4	4	3.5	24	4	07	7
22	5	5	5	5	5	6	7	7	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	4.1	24	7	05	10
23	4	4	3	4	4	4	5	5	5	4	3	3	3	3	3	3	3	3	3	3	4	4	5	4	3.8	24	5	07	9
24	4	4	4	4	4	4	5	5	4	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3.6	24	5	05	5
25*	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.1	24	3	00	3
26*	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	2	2	1.7	24	3	06	3
27	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2.2	24	3	07	6
28	3	3	3	3	3	4	5	5	5	3	3	3	3	3	3	3	3	3	4	3	4	4	4	4	3.5	24	5	15	7
29	4	3	4	4	4	4	5	5	4	4	4	4	4	4	4	3	3	3	4	4	4	4	3	2	3.6	24	5	06	6
30	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2.6	24	3	08	4
31	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	4	4	4	3.0	24	4	09	5
AVE	3	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2		4		6
#	31	31	31	31	31	31	31	31	31	31	30	29	30	31	31	31	31	31	31	31	31	31	31	31		740	31		31
MAX	6	6	6	6	5	6	7	7	6	5	5	4	5	5	4	4	4	4	4	5	7	7	7	5	4.5		7		10

*=WEEKEND OR HOLIDAY. **=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

JOB NUMBER =
PROGRAM =GAMZLSTA
DATE= 10/23/73

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

VA. 015

CARBON MONOXIDE / HOURLY AVERAGE / IN PPM

STATION 060

09 / 1973

DAY	HOUR PST 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
01*	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.8	24	4	01	5
02*	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2.2	24	3	01	4
03*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	2	01	3
04	2	2	2	2	2	2	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	2.5	24	3	06	4
05	2	2	2	2	2	2	2	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	2.5	24	3	23	4
06	3	3	3	3	3	3	6	5	5	4	4	4	4	5	4	4	4	4	4	4	5	6	6	6	4.3	24	6	06	9
07	6	6	6	6	6	6	7	6	5	5	5	4	4	4	3	3	3	3	3	3	2	2	3	3	4.3	24	7	06	8
08*	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	3	2	2	2	2	2	2	2	2.2	24	3	10	3
09*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	2	00	3
10	1	1	1	1	1	1	2	2	3	3	3	4	3	3	3	3	3	3	3	3	3	2	2	2	2.3	24	4	11	4
11	2	2	2	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	2.9	24	4	05	5
12	3	3	3	3	4	5	5	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4.0	24	5	05	7
13	4	4	4	4	3	3	3	4	4	3	3	3	3	3	3	4	6	4	4	4	4	3	3	3	3.6	24	6	16	7
14	3	4	4	3	3	3	4	4	4	4	4	5	5	5	5	5	5	5	5	5	4	5	4	4	4.3	24	5	08	7
15*	4	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3.9	24	4	11	5
16*	3	4	4	4	3	3	3	3	3	3	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3.4	24	4	11	5
17	3	3	3	3	3	3	3	4	6	6	4	4	4	4	4	4	4	3	4	4	4	4	3	3	3.8	24	6	08	9
18	3	3	3	3	3	3	3	3	4	5	5	5	4	4	3	4	4	4	4	4	4	4	4	4	3.8	24	5	10	6
19	3	3	3	3	3	3	3	3	4	5	5	5	5	5	5	4	4	4	4	5	5	4	4	4	4.2	24	5	12	6
20	4	4	4	3	3	3	4	4	4	5	5	5	5	5	5	5	4	3	3	3	4	4	4	5	4.0	24	5	06	5
21	5	5	4	4	5	6	8	6	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4.5	24	8	05	9
22*	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2.8	24	4	02	4
23*	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.2	24	3	20	4
23*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2.7	24	5	05	7
24	3	3	3	2	3	5	3	3	4	3	2	2	3	3	3	3	2	2	4	5	7	6	4	3	3.3	24	7	19	8
25	2	2	2	2	2	2	2	2	2	3	3	3	3	3	4	4	3	3	4	4	3	4	4	2	4	3.9	24	6	06	10
26	5	5	5	5	5	4	6	5	5	3	2	3	3	3	3	3	3	4	4	3	3	3	2	2	2.3	24	4	19	6
27	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	4	3	3	3	2	2	3.5	24	7	07	11
28	2	2	1	2	2	2	4	7	4	3	2	2	2	2	3	3	3	5	5	6	7	6	4	6	3.6	24	7	06	10
29*	7	6	4	4	2	4	5	5	4	4	3	2	2	2	2	2	2	3	3	3	4	5	5	4	2.5	24	4	00	5
30*	4	3	4	3	3	4	3	4	3	3	3	3	3	2	1	1	1	1	2	2	2	2	2	2	2.5	24	4	00	5
AVE	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2		5		6
N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		720	30		30
MAX	7	6	6	6	6	6	8	7	6	6	5	5	5	5	5	5	6	5	5	7	7	6	6	6	4.5		8		11

*=WEEKEND OR HOLIDAY.***=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

Reproduced from best available copy.

JOB NUMBER =
PROGRAM =GNAMAJ1
DATE: 09/24/73

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

NITROGEN DIOXIDE / HOURLY AVERAGE / IN PPHM

STATION 60

8 / 1973

DAY	HOUR PST 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	1HR AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
														5	7	9	10	10	13	13	13	13	13	13	10.6	23	16	08	19
01	11	10	10	10	9	9	8	11	16	14	9	8		8	8	8	10	10	12	14	20	20	20	15	12.3	23	20	21	22
02	14	13	12	10	9	8	9	13	14	14	13	10		11	6	6	10	10	10	9	9	9	8	8	9.7	23	13	09	16
03	12	12	11	10	9	8	8	9	12	13	12	12		5	8	9	7	8	10	11	9	9	8	8	8.1	23	11	18	12
04*	9	8	7	7	8	7	7	9	9	8	7	8		5	5	7	7	6	7	9	9	8	8	8	7.2	23	9	19	10
05*	9	8	8	8	7	7	7	7	7	7	6	6		7	6	9	8	8	9	8	6	6	6	6	6.5	23	9	15	10
06	6	6	5	4	4	5	6	6	6	6	8	8		6	6	6	7	7	9	9	7	7	6	6	7.0	23	12	10	14
07	6	6	5	4	4	4	6	7	8	11	12	11		6	7	7	7	9	10	9	8	8	8	6	7.6	23	10	10	12
08	6	6	6	6	6	6	6	8	10	10	10	9		6	5	6	8	7	8	10	10	8	6	5	5.9	18	10	20	12
09	5	5	3	3	3	3	5	7						8	10	9	10	10	12	12	12	10	9	9	6.9	23	12	19	13
10	5	4	3	2	2	2	3	3	5	6	7	5		4	4	5	5	5	7	9	9	9	9	9	6.4	23	9	20	11
11*	9	8	8	7	4	4	4	6	7	5	6	5		3	4	5	5	5	8	10	12	11	11	7	7.9	23	12	20	13
12*	9	9	9	9	9	8	8	9	9	10	6	5		9	8	8	9	11	11	10	11	9	7	7	8.1	23	11	09	13
13	6	6	6	6	6	6	6	6	9	11	11	8		8	8	9	7	11	12	13	11	9	8	7	9.1	23	14	09	16
14	7	7	6	6	6	6	7	9	12	14	14	13		12	9	8	11	10	9	9	8	8	7	7	8.3	23	13	13	16
15	6	6	6	6	6	6	7	8	11	13	10	9		11	10	9	9	9	11	11	11	9	8	7	9.5	23	17	09	18
16	7	7	6	7	7	7	8	11	15	17	13	8		12	11	9	9	11	12	13	14	14	14	13	10.0	23	15	10	17
17	6	5	5	5	5	5	6	8	12	11	15	15		5	5	5	6	7	9	11	12	12	12	11	10.2	23	18	07	22
18*	12	12	11	11	10	10	10	10	17	11	7	7		4	4	4	4	5	8	9	9	8	8	8	8.1	23	15	08	17
19*	12	11	10	10	8	9	9	11	15	10	7	4		9	10	6	8	8	6	7	7	7	6	6	6.4	23	15	10	23
20	6	6	1	1	5	5	2	2	7	11	15	7																	
21	5	5	5	5	5	5	5							5	6	6	7	8	10	9	9	10	10	9	6.9	18	10	00	**
22	P	9	9	8	8	8	10										8	9	9	10	10	10	10	10	9.1	15	10	00	**
23	11	11	13	13	13	13	11	11	14	14	11	9		5	7	7	8	8	11	12	12	11	10	10	10.7	23	14	09	15
24	9	9	8	8	8	8	11	12	13	14	13	9		7	6	6	6	6	6	8	8	8	9	8	8.7	23	14	09	15
25*	6	5	4	2	1	2	3	3	3	3	3	3		2	3	3	3	4	5	5	4	4	4	3	3.4	23	6	00	6
26*	3	3	2	1	1	1	1	1	1	1	1	2		2	2	2	3	3	4	6	5	6	5	3	2.6	23	6	19	6
27	3	3	3	4	4	4	4	4	4	6	6	4		6	5	5	5	5	6	6	5	5	5	6	4.7	23	6	10	7
28	6	7	7	7	7	7	9	12	16	13	12	12		8	7	5	6	8	9	9	9	8	7	7	8.6	23	16	08	22
29	5	5	5	5	5	5	6	9	11	13	14	11		8	6	6	7	10	11	11	10	7	7	6	8.0	23	14	09	15
30	7	6	6	7	7	8	8	8	9	10	10	11		8	5	6	7	7	6	8	7	7	6	6	7.5	23	11	11	12
31	6	6	5	6	6	6	7	7	8	9	9	9		7	6	8	6	5	5	6	6	7	7	7	6.7	23	9	11	11
AVE	7	7	7	6	6	6	7	8	10	10	10	8		7	6	7	7	8	9	10	9	9	8	8	7.8		12		14
N	31	31	31	31	31	31	31	29	28	28	28	28		29	30	30	31	31	31	31	31	31	31	31		695	31		29
MAX	14	13	13	13	13	13	13	18	17	17	15	15		12	11	9	11	11	13	14	20	20	20	15	12.3		20		23

*=WEEKEND OR HOLIDAY. **=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

JOB NUMBER =
PROGRAM =CAMALSTA
DATE: 10/23/73

NITROGEN DIOXIDE / HOURLY AVERAGE / IN PPHM

STATION 060 09 / 1973

DAY	HOUR PST 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
01*	6	6	6	6	6	7	7	7	6	5	4	4		3	2	3	5	6	7	8	7	6	6	6	5.6	23	8	07	8
02*	6	6	6	7	7	8	8	8	6	5	6	6		5	6	6	5	4	5	5	5	4	3	3	5.7	23	8	07	9
03*	3	4	3	3	3	4	4	4	4	4	4	4		4	3	3	3	4	3	4	4	4	5	5	3.7	23	5	19	5
04	4	4	4	4	4	4	4	5	5	5	6	6		7	7	9	8	9	8	8	8	6	4	4	5.8	23	9	15	10
05	4	2	2	2	2	4	4	5	6	4	4	4		4	5	7	7	6	7	7	7	6	6	6	4.8	23	7	18	9
06	6	6	6	6	6	7	7	10	12	11	9	9		8	8	8	8	9	10	13	13	13	13	12	9.1	23	13	19	14
07	12	12	11	11	10	10	11	13	13	15	15	14		9	9	7	6	9	11	10	8	7	7	7	10.3	23	15	09	16
08*	7	4	1	1	1	1	2	2	2	2	3	3		2	2	4	4	4	5	5	5	5	5	6	3.3	23	7	00	7
09*	5	4	4	4	4	2	2	2	3	3	3	3		3	3	3	3	4	4	5	4	4	4	5	3.5	23	5	00	6
10	3	3	3	2	2	3	4	5	6	6	6	8		9	9	9	9	9	9	8	7	7	6	7	6.1	23	9	13	9
11	7	7	7	7	7	7	5	6	8	8	7	7		6	7	6	6	7	7	7	6	6	7	7	6.7	23	8	08	12
12	6	5	5	5	5	4	5	7	10	12	13	13		12	12	13	11	12	13	12	12	11	11	12	9.6	23	13	10	15
13	12	12	11	11	10	10	6	5	7	7	7	8		7	7	10	11	11	11	8	7	8	10	9	8.9	23	12	00	12
14	8	8	8	7	8	9	8	8	5	6	7	8		7	7	9	10	10	11	10	10	10	10	9	8.4	23	11	18	11
15*	9	8	6	4	3	2	3	3	4	5	5	5		5	4	4	5	7	11	9	6	5	5	5	5.3	23	11	19	12
16*	5	5	6	7	5	3	3	3	3	4	5	5		4	4	4	5	6	10	11	10	10	10	6	5.8	23	11	18	11
17	6	4	6	5	3	1	1	5	9	12	11	8		5	5	7	8	10	13	13	14	13	12	12	8.0	23	14	20	14
18	10	7	7	7	8	8	7	6	12	14	15	14		7	5	5	11	10	11	12	12	11	9	7	9.3	23	15	10	15
19	4	6	7	7	8	8	10	11	12	13	14	14		9	8	8	8	9	11	11	10	9	8	8	9.3	23	14	11	15
20	7	7	7	7	8	8	9	9	10	10	10	11		10	9	10	10	10	11	11	11	11	10	9	9.3	23	11	11	12
21	8	7	6	6	6	6	7	8	8	10	9	7		4	5	8	10	12	13	12	13	13	12	11	8.7	23	13	20	14
22*	11	11	11	11	8	8	7	5	5	5	5	5		4	5	7	7	8	8	6	5	4	4	7	6.8	23	11	00	11
23*	7	7	6	5	3	4	4	4	4	3	3	3		3	4	5	5	6	6	8	5	5	6	5	4.8	23	8	19	8
24	4	4	4	3	4	4	3	5	8	8	6	5		7	8	7	6	7	8	7	6	6	6	6	5.7	23	8	08	9
25	5	5	5	5	4	3	2	3	5	6	6	6		8	6	6	7	11	14	14	14	10	4	7	6.9	23	14	16	16
26	12	11	12	12	13	10	7	10	13	6	6	5		4	4	5	5	10	6	10	7	8	2	1	7.8	23	13	08	15
27	1	1	2	1	2	2	3	4	4	4	5	4		4	4	5	7	4	7	7	8	6	2	4	4.0	23	8	20	9
28	1	2	1	1	1	3	6	11	11	9	5	3		5	8	13	9	15	20	17	16	15	13	11	8.5	23	20	18	22
29*	13	12	8	8	3	5	8	10	11	11	12	8		5	5	7	9	11	13	14	13	14	13	12	9.8	23	14	00	15
30*	11	9	9	8	10	10	10	11	12	12	11	9		4	4	6	6	7	9	10	10	9	7	7	8.7	23	12	08	12
AVE	7	6	6	6	5	6	6	7	7	8	7	7		6	6	7	7	8	9	9	9	8	7	7	7.0		11		12
N	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30	30	30	30	30		690	30		30
MAX	13	12	12	12	13	10	11	13	13	15	15	14		12	12	13	11	15	20	17	16	15	13	12	10.3		20		22

*=WEEKEND OR HOLIDAY.***=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

JOB NUMBER =
PROGRAM -ONAMAJ1
DATE= 09/24/73

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

HYDROCARBONS, AS METHANE / HOURLY AVERAGE / IN PPM

STATION 60

8 / 1973

DAY	HOUR PST 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	1HR AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
01	4	4	4	5		4	4	5	4	4	3	3	3	3	4	3	3	3	3	3	3	3	3	4	3.6	23	5	00	**
02	3	4	4	4	4	4		4	4	3	4			3	3	3	3	3	3	3	4	4	4	4	3.6	21	4	00	**
03	3	3	4	4	4	4	4	3	4	3	3	3	3	3	3	3	3	2	2	2	2	2	3	3	3.0	24	4	06	4
04*	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2.5	24	3	00	3
05*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0	24	2	00	2
06	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2	2	3	3	2.3	24	3	23	3
07	4	4	3	4	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	4	2.9	24	4	03	5
08	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	4	2.9	24	4	23	4
09	3	4	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3.2	24	5	02	6
10	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2	24	5	00	5
11*	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3	23	3
12*	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	4	08	4
13	3	3	3	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	23	3	12	3
14	3	3	3	3	3	3	3	4	4	4	4									3	3	3	2	2	3.1	17	4	09	4
15	3	3	4	4	4	5	7	6	6	5	4	4	5	4		2	2	2	2	2	2	2	3	3	3.7	23	7	06	8
16	4	5	5	4	4	4	5	5	5	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3.8	24	5	06	5
17	3	3	3	3	3	3	4	3	3	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3.2	24	4	11	4
18*	4	4	5	6	5	9	8	7	5	4	3	3	3	3	3	3	3	3	3	3	3	4	3	4	4.2	24	9	05	11
19*	4	5	5	6	4	4	4	4	4	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3.4	24	6	03	7
20	4	3	2	3	3	3	2	3	3	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3.1	24	4	00	4
21	3	3	4	4	4	4	6	4	3	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	3.6	24	6	06	6
22	4	5	5	6	7	6	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	4	5	4.0	24	7	04	9
23	4	4	4	4	4	4	4	4	4	3	3	3	4	3	3	3	3	3	3	3	3	4	5	4	3.6	24	5	22	5
24	5	4	5	4	4	4	5	4	4	4	4	4	3	3	3	3	3	3	3	3	3	4	5	3	3.8	24	5	00	6
25*	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	3	3	3	3	3	2.8	24	3	00	4
26*	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3	00	3
27	3	3	3	3	3	4	3	3	3	3			3	3	3	3	3	3	3	3	3	4	3	3	3.1	22	4	21	4
28	3	4	4	4	4	5	5	4	4	4	3	4	4	4	3	3	3	3	3	3	3	3	4	5	3.7	24	5	06	6
29	4	4	5	5	5	5	5	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3.8	24	5	00	5
30	4	4	3	3	3	3	3	3	4	4	4	3	3	4	3	3	3	3	3	3	3	3	3	3	3.3	24	4	01	5
31	3	3	3	3	3	3	3	3	3	4	5	5	4	4	3	3	3	3	3	3	3	3	4	5	3.4	24	5	10	6
AVE	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.2		5		5
*	31	31	31	31	30	31	30	31	31	31	29	28	29	30	29	30	30	30	31	31	31	31	31	31		729	31		29
MAX	5	5	5	6	7	9	8	7	6	5	5	5	5	4	4	3	3	3	3	3	4	4	5	5	4.2		9		11

*=WEEKEND OR HOLIDAY. **=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

AIR POLLUTION CONTROL DISTRICT - COUNTY OF LOS ANGELES

STATION 060 — 09 / 1973

HYDROCARBONS, AS METHANE / HOURLY AVERAGE / IN PPM

JOB NUMBER =
PROGRAM =SANZLSTA
DATE: 10/23/73

DAY	HOUR PST 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE.	N	1HR MAX	INSTANT. HR	INSTANT. MAX
01	4	4	5	8	6	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.5	24	8	03	9
02	3	3	4	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.1	24	4	04	4
03	3	3	3	3	3	3	3	.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3	00	3
04	3	3	3	3	3	3	3	.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3	11	3
05	3	3	3	3	3	3	3	.	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3.2	24	4	22	5
06	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	4.6	24	7	04	9
07	4	4	4	4	7	6	6	4	4	4	4	4	5	5	4	4	4	4	4	4	5	7	5	5	4.5	24	8	02	9
08	5	5	6	7	6	5	6	6	5	5	5	5	4	4	4	3	3	3	3	3	3	3	3	3	3.2	24	4	01	4
09	3	4	4	3	3	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3.0	24	3	00	3
10	3	3	3	3	3	3	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3.3	24	4	06	4
11	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	4	4	3	3.2	24	4	22	4
12	3	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.1	24	5	06	5
13	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	4	4	3	3.8	24	4	06	4
14	3	3	3	3	3	4	3	3	4	5	4	4	4	4	4	4	4	4	3	3	3	4	4	4	3.7	24	5	09	5
15	4	4	4	3	3	3	3	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	4	5	3.5	24	5	23	5
16	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3.3	24	4	01	5
17	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3.5	24	5	12	5
18	3	3	3	3	3	3	3	3	3	3	4	4	5	4	4	4	4	4	3	3	4	4	4	4	4.0	24	5	02	5
19	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.3	24	5	00	5
20	5	5	5	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	5	4	4	6	4.3	24	6	03	6
21	5	4	4	6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4.5	24	5	06	6
22	5	5	5	5	5	5	5	5	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	3.8	24	4	22	5
23	4	4	4	4	4	4	4	4	4	4	3	4	4	4	3	4	4	4	3	3	4	3	3	4	3.4	24	4	06	5
24	4	4	4	4	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3.2	20	4	07	4
25	3	3	3	3	3	4	3	4	3	3	3	3	3	3	3	3	3	4	4	6	5	4	4	4	3.4	24	6	19	6
26	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3.6	24	5	01	5
27	4	5	4	5	5	4	4	5	5	4	4	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3.2	24	4	20	4
28	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	4	4.0	24	6	23	7
29	3	3	3	3	3	3	3	4	5	4	3	5	4	3	3	4	4	4	4	4	5	5	5	5	4.4	24	5	00	5
30	5	5	5	5	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3.8	24	4	01	5
31	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	4	4	4	4	4	4	4	3.7	716	5	30	5
AVE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	4	4	4	4	4	4.6		8		9
N	30	30	30	30	30	30	30	30	30	29	29	29	29	30	30	30	30	30	30	30	30	30	30	30					
MAX	5	5	6	8	7	5	6	6	5	5	5	5	5	5	4	4	4	4	4	6	5	7	6	6					

*=WEEKEND OR HOLIDAY, ***=INSUFFICIENT DATA FOR DAY TO DETERMINE A MAXIMUM

Reproduced from best available copy.

AID ANALYSIS

The procedure followed in AID is to divide the sample into a set of mutually exclusive and exhaustive subgroups, through a succession of binary splits of the data. At each step, the split is based on values of one predictor variable. The predictor variable, and its values associated with each subgroup of the split, are chosen in such a way as to minimize the error sum of squares of the dependent variable. The final result of applying the AID procedure is a classification tree, which yields a sequential decision rule based on predictor variables. The result of each "path" of the decision rule is a final subgroup. Since each final subgroup is characterized by the mean and standard deviation of dependent variable values included in it, and since the paths leading to final subgroups can be characterized by a sequence of sets of values of predictor variables, a quantitative statement can be formulated for each path and used for purposes of classification or prediction.

AID has advantages over traditional statistical methods such as regression analysis. With AID, no assumptions about linearity or homoscedasticity need be made. Interactions among predictor variables relative to a dependent variable do not invalidate an AID analysis. In fact, AID helps to identify such interactions in the data.

The first AID analysis in this appendix shows the results obtained from St. Louis with NO_x as dependent variable. In order to understand the results, a description of how to analyze the output is included here. The criterion scale on the upper left of the figure is in units (ppm) of the dependent variable, NO_x. The tabular information on the right begins with descriptive statistics about the sample. The criterion variable is given (NO_x), there are 598 observations (hourly averages) in the sample, and the average value of NO_x in this sample is 0.04 ppm with a standard deviation of 0.02. The disk containing the number one represents this sample on the graph, and is located at the mean value (0.04) of the NO_x observations in the sample.

The sample is split first by ozone into subgroups 2 and 3. On the graph, the subgroups are located at the mean value of the NO_x observations

in each subgroup. Information pertaining to this split is contained in the table immediately to the right of the graphical display. Hence, subgroup 2 contains 248 observations with an average value of NO_x of 0.06 and a standard deviation of 0.02; the corresponding information for group 3 is 350 observations, a mean of 0.03, and a standard deviation of 0.01. Further, the table lists the values of the predictor variable (O_3) associated with subgroups 2 and 3. The coded values 0 through 7 are associated with group 2, and the coded values from 8 through 63 are associated with group 3. Asterisks at the end of a list signify that more coded values follow, but no space exists to complete the list. Each predictor variable is coded initially into integer values in the range 0 to 63. The coding is done as follows: let R denote the range of the observed values, let z denote the minimum of the observed values, and let x denote a predictor value; the coded value c is given by

$$c = \left[62.5 \frac{x - z}{R} + 0.5\right] ,$$

where $[\alpha]$ denotes the greatest integer less than or equal to α.

In words, one may describe the first split loosely as follows: when O_3 values are in the lowest eighth of their range, the corresponding NO_x readings have a mean of 0.06; when the O_3 values are higher, the corresponding NO_x readings have a mean of 0.03.

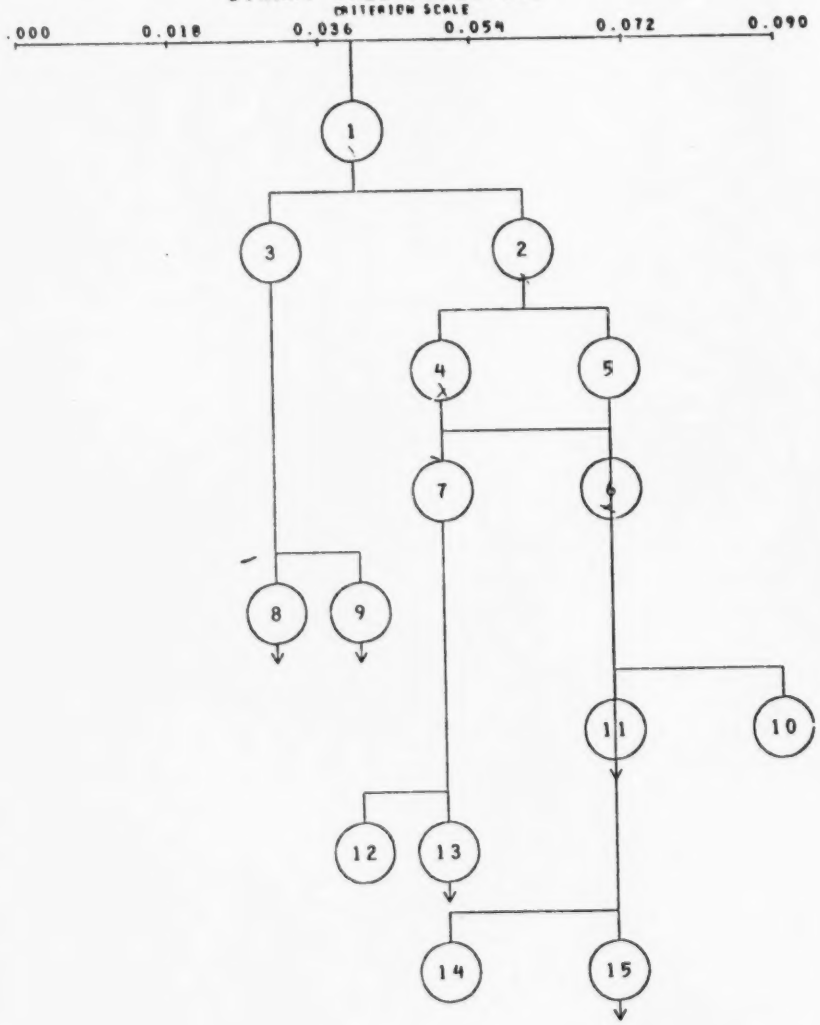
The remaining splits may be interpreted in a similar fashion. As a practical way of choosing important variables and interactions from an AID tree, one generally observes the variables associated with the first "several" splits. It is possible by utilizing various stopping rules, formal statistical tests, and iterative procedures to refine an AID tree to a well-formed rule. However, the purpose here was to observe important trends and relationships in the data, so the initial trees suffice.

ST. LOUIS DATA

AUTOMATIC INTERACTION DETECTOR

FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - NOX

TOTAL GROUP N = 598
MEAN = 0.04
STD. DEV. = 0.02

PARENT 1 SPLITTING VARIABLE - OZONE

MEAN= 0.03 S.D.= 0.01 N= 350
PREDICTOR VALUES -- 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 .

MEAN= 0.06 S.D.= 0.02 N= 248
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7

PARENT 2 SPLITTING VARIABLE - HNO3

MEAN= 0.05 S.D.= 0.02 N= 174
PREDICTOR VALUES -- 0 1

MEAN= 0.07 S.D.= 0.02 N= 74
PREDICTOR VALUES -- 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 23 28

PARENT 4 SPLITTING VARIABLE - OZONE

MEAN= 0.05 S.D.= 0.02 N= 120
PREDICTOR VALUES -- 1 2 3 4 5 6 7

MEAN= 0.07 S.D.= 0.02 N= 54
PREDICTOR VALUES -- 0

PARENT 3 SPLITTING VARIABLE - HNO3

MEAN= 0.03 S.D.= 0.01 N= 233
PREDICTOR VALUES -- 0 1

MEAN= 0.04 S.D.= 0.01 N= 117
PREDICTOR VALUES -- 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 19 25 27 29 33 34 43 63

PARENT 5 SPLITTING VARIABLE - HUMIDITY

MEAN= 0.07 S.D.= 0.02 N= 66
PREDICTOR VALUES -- 39 40 41 42 43 44 46 47 48 49 50 52 53 54 55 56 57 58 59 60 62 63

MEAN= 0.09 S.D.= 0.03 N= 8
PREDICTOR VALUES -- 27 33 34 35 36 38
FINAL GROUP

PARENT 7 SPLITTING VARIABLE - TEMP

MEAN= 0.04 S.D.= 0.01 N= 41
PREDICTOR VALUES -- 0 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18
FINAL GROUP

MEAN= 0.05 S.D.= 0.02 N= 79
PREDICTOR VALUES -- 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 36 37 38 39 40 41 42 43

PARENT 6 SPLITTING VARIABLE - AMMONIA

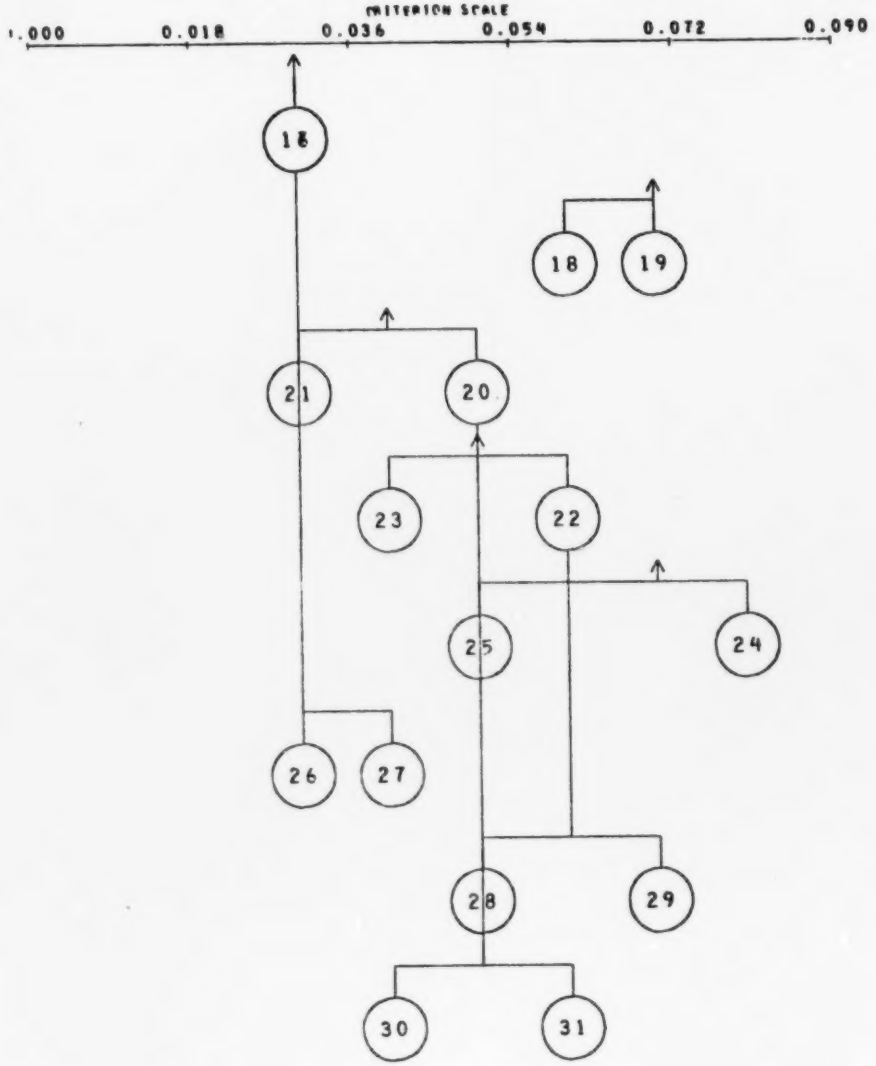
MEAN= 0.05 S.D.= 0.02 N= 23
PREDICTOR VALUES -- 0 1 3
FINAL GROUP

MEAN= 0.07 S.D.= 0.02 N= 31
PREDICTOR VALUES -- 4 6 7 9 10 13 18 21 27

Reproduced from best available copy.

C-3

11/08/73
17.00.50
BATTELLE-COLUMBUS

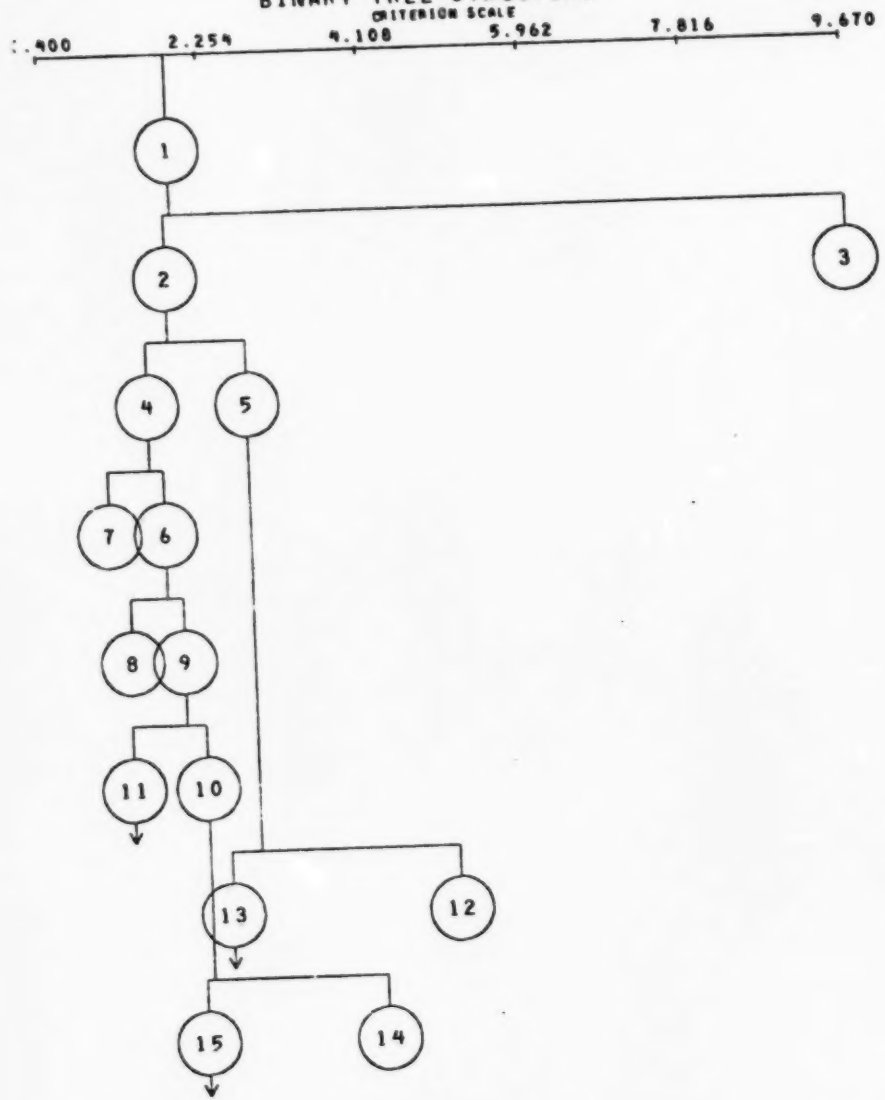


SUMMARY CONTINUED

PARENT 8 SPLITTING VARIABLE - OZONE	
MEAN= 0.03 S.D.= 0.01 N= 117 PREDICTOR VALUES -- 8 9 10 11 12 13 14 15 16 17	MEAN= 0.03 S.D.= 0.01 N= 116 PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 39 41 42 44 46 47 48 49 56 * FINAL GROUP
PARENT 11 SPLITTING VARIABLE - AMMONIA	
MEAN= 0.06 S.D.= 0.02 N= 47 PREDICTOR VALUES -- 0 1 3 4 6 7 9 FINAL GROUP	MEAN= 0.07 S.D.= 0.02 N= 19 PREDICTOR VALUES -- 10 12 15 19 27 63 FINAL GROUP
PARENT 9 SPLITTING VARIABLE - OZONE	
MEAN= 0.03 S.D.= 0.01 N= 69 PREDICTOR VALUES -- 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 41 42 43 47 51 52 55 58 * FINAL GROUP	MEAN= 0.05 S.D.= 0.01 N= 53 PREDICTOR VALUES -- 8 9 10 11 12 13 14 15 16 17 18 19
PARENT 13 SPLITTING VARIABLE - OZONE	
MEAN= 0.04 S.D.= 0.01 N= 35 PREDICTOR VALUES -- 4 5 6 7 FINAL GROUP	MEAN= 0.06 S.D.= 0.02 N= 44 PREDICTOR VALUES -- 1 2 3
PARENT 15 SPLITTING VARIABLE - AMMONIA	
MEAN= 0.05 S.D.= 0.00 N= 6 PREDICTOR VALUES -- 27 FINAL GROUP	MEAN= 0.08 S.D.= 0.02 N= 25 PREDICTOR VALUES -- 4 6 7 9 10 13 18 21 FINAL GROUP
PARENT 16 SPLITTING VARIABLE - AMMONIA	
MEAN= 0.03 S.D.= 0.01 N= 92 PREDICTOR VALUES -- 0 1 3 4 6 FINAL GROUP	MEAN= 0.04 S.D.= 0.01 N= 29 PREDICTOR VALUES -- 7 9 10 12 13 15 16 19 21 24 25 27 28 31 FINAL GROUP
PARENT 22 SPLITTING VARIABLE - GLOBAL	
MEAN= 0.05 S.D.= 0.01 N= 28 PREDICTOR VALUES -- 0 1 FINAL GROUP	MEAN= 0.07 S.D.= 0.02 N= 16 PREDICTOR VALUES -- 3 6 7 8 11 12 13 14 17 18 19 20 FINAL GROUP
PARENT 20 SPLITTING VARIABLE - HNO3	
MEAN= 0.04 S.D.= 0.01 N= 92 PREDICTOR VALUES -- 2 3 4 5 6 7 8 9 10 12 FINAL GROUP	MEAN= 0.06 S.D.= 0.02 N= 11 PREDICTOR VALUES -- 14 17 25 27 29 33 34 43 63 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - PAN

TOTAL GROUP N = 598
MEAN = 1.89
STD. DEV. = 1.77

PARENT 1 SPLITTING VARIABLE - OZONE

MEAN= 1.01 S.D.= 1.46 N= 592
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 ...

MEAN= 9.67 S.D.= 6.37 N= 6
PREDICTOR VALUES -- 93 95 96 98 63
FINAL GROUP

PARENT 2 SPLITTING VARIABLE - OZONE

MEAN= 1.55 S.D.= 1.23 N= 458
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

MEAN= 2.71 S.D.= 1.88 N= 134
PREDICTOR VALUES -- 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 41 42 43 44 46 47 48 49 91

PARENT 4 SPLITTING VARIABLE - WIND DIR

MEAN= 1.06 S.D.= 0.91 N= 112
PREDICTOR VALUES -- 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 63
FINAL GROUP

MEAN= 1.71 S.D.= 1.28 N= 346
PREDICTOR VALUES -- 0 1 6 8 9 10 11 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 ...

PARENT 6 SPLITTING VARIABLE - NO2

MEAN= 1.28 S.D.= 0.89 N= 102
PREDICTOR VALUES -- 2 5 6 8 9 10 11 12 13 14 15 16 17
FINAL GROUP

MEAN= 1.89 S.D.= 1.37 N= 244
PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 44 45 46 47 ...

PARENT 9 SPLITTING VARIABLE - AMMONIA

MEAN= 1.25 S.D.= 0.90 N= 69
PREDICTOR VALUES -- 10 12 13 15 16 18 19 21 22 24 25 27 28 31 36 42 63

MEAN= 2.11 S.D.= 1.44 N= 100
PREDICTOR VALUES -- 0 1 3 4 6 7 9

PARENT 5 SPLITTING VARIABLE - WIND SP

MEAN= 2.35 S.D.= 1.37 N= 116
PREDICTOR VALUES -- 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 ...

MEAN= 5.00 S.D.= 2.45 N= 10
PREDICTOR VALUES -- 2 5 8 10 11 12 13
FINAL GROUP

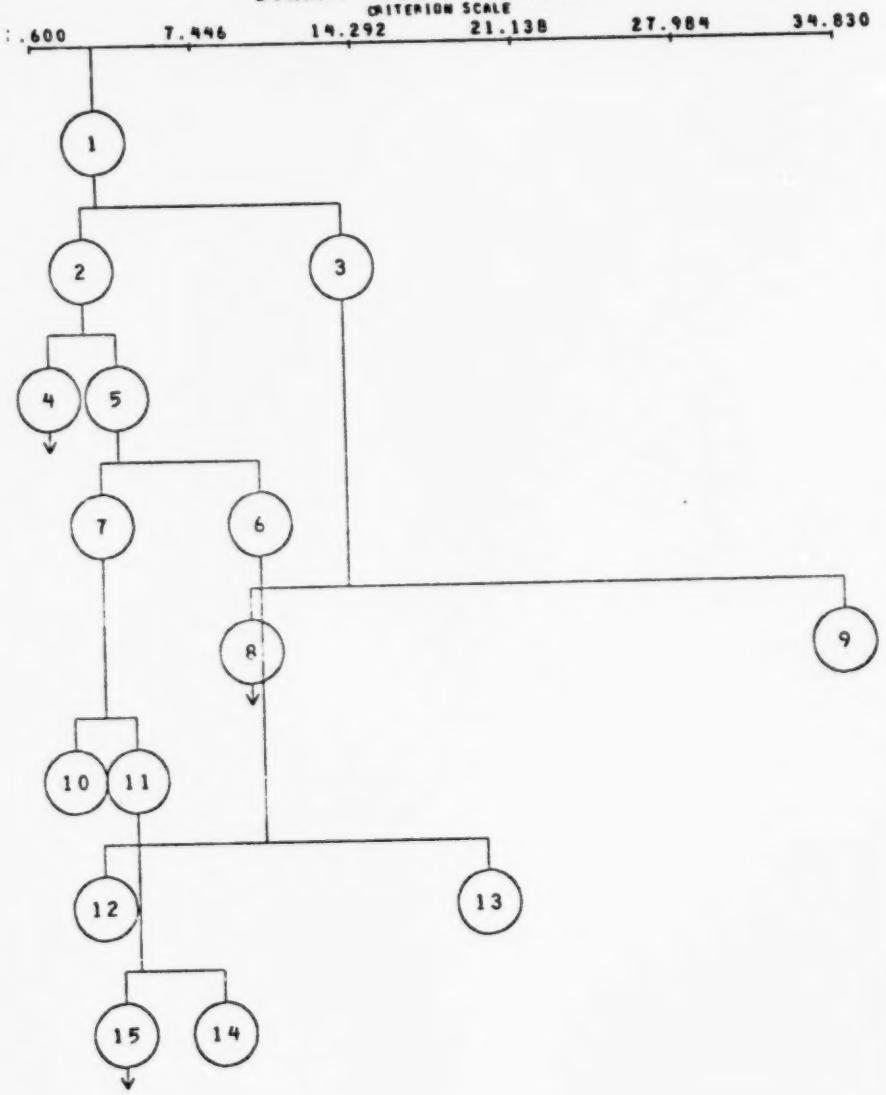
PARENT 10 SPLITTING VARIABLE - NO

MEAN= 2.02 S.D.= 1.40 N= 172
PREDICTOR VALUES -- 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 24 25 28 29 31 33 34 36 ...

MEAN= 4.12 S.D.= 0.78 N= 8
PREDICTOR VALUES -- 0 1
FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - HNO3

TOTAL GROUP N = 598
MEAN = 3.23
STD. DEV. = 7.20

PARENT 1 SPLITTING VARIABLE - NO2

MEAN= 2.56 S.D.= 5.69 N= 562
PREDICTOR VALUES -- 0 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 ...

MEAN= 13.72 S.D.= 19.70 N= 36
PREDICTOR VALUES -- 38 39 40 41 44 45 46 47 48 51 52 53 55 63

PARENT 2 SPLITTING VARIABLE - NO2

MEAN= 1.03 S.D.= 2.40 N= 268
PREDICTOR VALUES -- 0 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

MEAN= 3.95 S.D.= 7.18 N= 294
PREDICTOR VALUES -- 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

PARENT 5 SPLITTING VARIABLE - WIND DIR

MEAN= 3.19 S.D.= 5.37 N= 261
PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 ...

MEAN= 9.97 S.D.= 13.79 N= 33
PREDICTOR VALUES -- 1 5 8 9 10 11 13 14 15 16 17

PARENT 3 SPLITTING VARIABLE - OZONE

MEAN= 9.50 S.D.= 8.39 N= 30
PREDICTOR VALUES -- 0 1 2 3 4 5 7 8 9 11 12

MEAN= 34.83 S.D.= 29.36 N= 6
PREDICTOR VALUES -- 15 17 19 30 38 43

FINAL GROUP

PARENT 7 SPLITTING VARIABLE - TEMP

MEAN= 1.69 S.D.= 4.26 N= 128
PREDICTOR VALUES -- 3 4 5 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

FINAL GROUP

MEAN= 4.50 S.D.= 6.60 N= 133
PREDICTOR VALUES -- 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 ...

PARENT 6 SPLITTING VARIABLE - GLOBAL

MEAN= 3.00 S.D.= 4.17 N= 19
PREDICTOR VALUES -- 0 1 5 8

FINAL GROUP

MEAN= 19.43 S.D.= 16.42 N= 14
PREDICTOR VALUES -- 10 11 16 24 25 28 36 41 42 47

FINAL GROUP

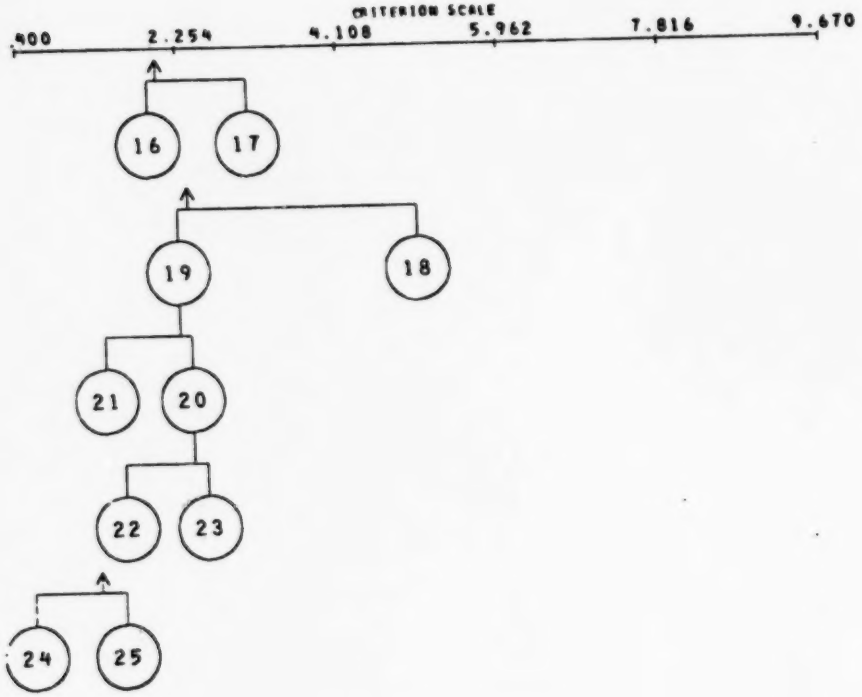
PARENT 11 SPLITTING VARIABLE - NOX

MEAN= 3.79 S.D.= 5.55 N= 111
PREDICTOR VALUES -- 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 33 42 56

MEAN= 8.69 S.D.= 6.89 N= 22
PREDICTOR VALUES -- 8 10 11 12 13

FINAL GROUP

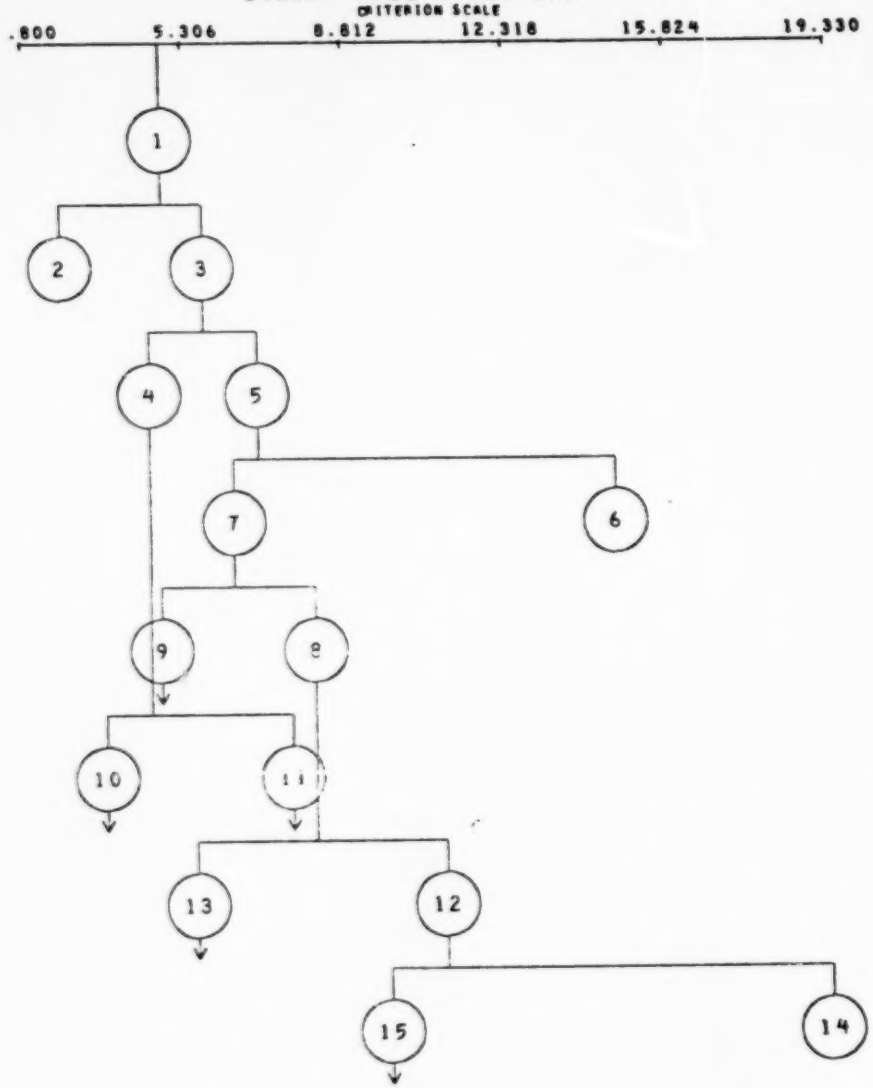
FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED	
PARENT 15 SPLITTING VARIABLE - HNO3	
MEAN= 1.92 S.D.= 1.19 N= 158 PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 FINAL GROUP	MEAN= 3.07 S.D.= 2.60 N= 14 PREDICTOR VALUES -- 13 14 16 17 18 23 25 27 29 33 43 63 FINAL GROUP
PARENT 13 SPLITTING VARIABLE - NOX	
MEAN= 2.23 S.D.= 1.11 N= 111 PREDICTOR VALUES -- 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 25	MEAN= 5.00 S.D.= 2.97 N= 9 PREDICTOR VALUES -- 0 4 FINAL GROUP
PARENT 19 SPLITTING VARIABLE - AMMONIA	
MEAN= 1.36 S.D.= 1.04 N= 14 PREDICTOR VALUES -- 16 18 19 21 24 25 30 31 43 FINAL GROUP	MEAN= 2.26 S.D.= 1.87 N= 97 PREDICTOR VALUES -- 0 1 3 4 6 7 9 10 12 13 15
PARENT 20 SPLITTING VARIABLE - NO2	
MEAN= 1.56 S.D.= 0.61 N= 16 PREDICTOR VALUES -- 7 8 9 FINAL GROUP	MEAN= 2.92 S.D.= 1.87 N= 81 PREDICTOR VALUES -- 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 26 27 28 FINAL GROUP
PARENT 11 SPLITTING VARIABLE - WIND SP	
MEAN= 0.47 S.D.= 0.50 N= 17 PREDICTOR VALUES -- 1 3 6 7 8 9 10 11 12 FINAL GROUP	MEAN= 1.93 S.D.= 0.85 N= 47 PREDICTOR VALUES -- 13 14 15 16 17 19 21 22 23 24 25 26 27 28 30 31 32 33 41 42 58 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - AMMONIA

TOTAL GROUP N = 598
MEAN = 4.83
STD. DEV. = 4.95

PARENT 1 SPLITTING VARIABLE - TEMP

MEAN= 2.59 S.D.= 3.96 N= 170 PREDICTOR VALUES -- 0 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 FINAL GROUP	MEAN= 5.72 S.D.= 5.47 N= 428 PREDICTOR VALUES -- 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 =

PARENT 3 SPLITTING VARIABLE - NOX

MEAN= 4.52 S.D.= 4.67 N= 211 PREDICTOR VALUES -- 0 1 3 4 5 6 7 8 9 10 11 12 13 14 15	MEAN= 6.89 S.D.= 5.93 N= 217 PREDICTOR VALUES -- 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 42 45 46 =

PARENT 5 SPLITTING VARIABLE - NO2

MEAN= 6.35 S.D.= 5.97 N= 203 PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 44 45 46 47 =	MEAN= 14.71 S.D.= 5.34 N= 14 PREDICTOR VALUES -- 12 13 14 15 16 FINAL GROUP

PARENT 7 SPLITTING VARIABLE - PAN

MEAN= 4.74 S.D.= 3.40 N= 106 PREDICTOR VALUES -- 7 10 13 16 20 23 30 36	MEAN= 8.12 S.D.= 6.81 N= 97 PREDICTOR VALUES -- 0 3

PARENT 4 SPLITTING VARIABLE - TEMP

MEAN= 3.52 S.D.= 3.76 N= 199 PREDICTOR VALUES -- 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 =	MEAN= 7.60 S.D.= 5.72 N= 52 PREDICTOR VALUES -- 50 51 52 53 54 55 56 57 58 59 61 62 63

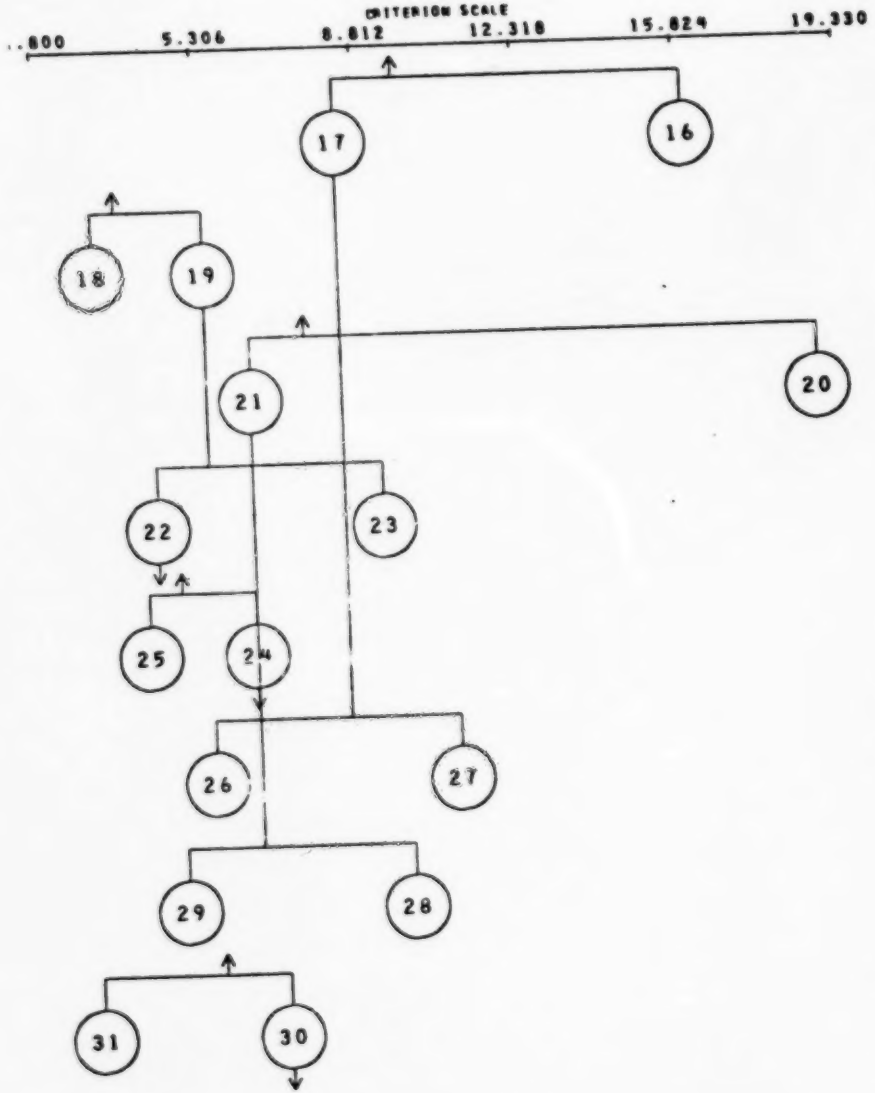
PARENT 8 SPLITTING VARIABLE - WIND DIR

MEAN= 5.48 S.D.= 4.25 N= 58 PREDICTOR VALUES -- 32 33 34 35 37 38 39 40 41 42 43 44 45 46 47 48 49 50 54 55 56 57	MEAN= 10.94 S.D.= 7.02 N= 47 PREDICTOR VALUES -- 6 11 16 17 19 20 21 22 23 24 25 26 27 28 29 30 31

PARENT 12 SPLITTING VARIABLE - HUMIDITY

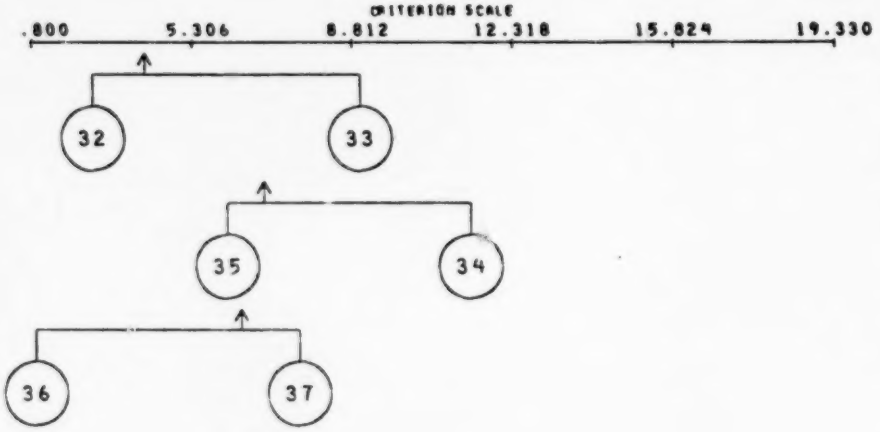
MEAN= 9.71 S.D.= 7.57 N= 41 PREDICTOR VALUES -- 26 33 34 35 36 38 39 40 42 43 44 48 49 52 54 55 56 57 58 59 63	MEAN= 19.33 S.D.= 2.62 N= 6 PREDICTOR VALUES -- 14 15 16 17 19 29 FINAL GROUP

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED	
PARENT 15 SPLITTING VARIABLE - TEMP	
MEAN= 8.41 S.D.= 5.03 N= 34 PREDICTOR VALUES -- 24 25 26 27 29 30 31 32 35 36 38 39 43 45 46 48 55 56	MEAN= 16.00 S.D.= 11.07 N= 7 PREDICTOR VALUES -- 22 23 FINAL GROUP
PARENT 10 SPLITTING VARIABLE - HUMIDITY	
MEAN= 2.99 S.D.= 1.94 N= 125 PREDICTOR VALUES -- 0 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 4 FINAL GROUP	MEAN= 5.44 S.D.= 6.09 N= 34 PREDICTOR VALUES -- 44 45 46 47 48 49 50 51 52 54 56 57 59 61 62 63
PARENT 11 SPLITTING VARIABLE - NO2	
MEAN= 6.40 S.D.= 4.52 N= 47 PREDICTOR VALUES -- 12 13 14 15 16 17 18 19 20 21 22 23 24 31	MEAN= 10.88 S.D.= 2.99 N= 5 PREDICTOR VALUES -- 5 8 9 11 FINAL GROUP
PARENT 19 SPLITTING VARIABLE - OZONE	
MEAN= 4.27 S.D.= 5.44 N= 20 PREDICTOR VALUES -- 2 4 5 7 8 9 10 11 12 13 15 16 17	MEAN= 9.25 S.D.= 9.32 N= 8 PREDICTOR VALUES -- 18 20 21 22 25 34 FINAL GROUP
PARENT 9 SPLITTING VARIABLE - NO	
MEAN= 4.02 S.D.= 2.92 N= 74 PREDICTOR VALUES -- 6 7 8 9 10 11 12 13 15 17 18 19 20 21 24 28 29 32 47 FINAL GROUP	MEAN= 6.37 S.D.= 3.84 N= 32 PREDICTOR VALUES -- 0 1 2 3 4 5
PARENT 17 SPLITTING VARIABLE - WIND DIR	
MEAN= 5.90 S.D.= 3.84 N= 15 PREDICTOR VALUES -- 6 11 16 17 19 20 21 22 23 FINAL GROUP	MEAN= 10.79 S.D.= 6.02 N= 19 PREDICTOR VALUES -- 24 25 26 27 29 30 31 FINAL GROUP
PARENT 21 SPLITTING VARIABLE - WIND DIR	
MEAN= 4.71 S.D.= 2.93 N= 31 PREDICTOR VALUES -- 27 30 31 32 33 35 36 37 38 39 40 41 42 43 44 46 52 55 FINAL GROUP	MEAN= 9.69 S.D.= 5.68 N= 16 PREDICTOR VALUES -- 9 19 20 21 22 23 24 25 26 FINAL GROUP
PARENT 13 SPLITTING VARIABLE - GLOBAL	
MEAN= 2.76 S.D.= 1.98 N= 17 PREDICTOR VALUES -- 11 13 14 15 17 18 19 23 29 30 31 33 34 38 43 44 FINAL GROUP	MEAN= 6.88 S.D.= 4.45 N= 33 PREDICTOR VALUES -- 0 1 3 5 6 9 10

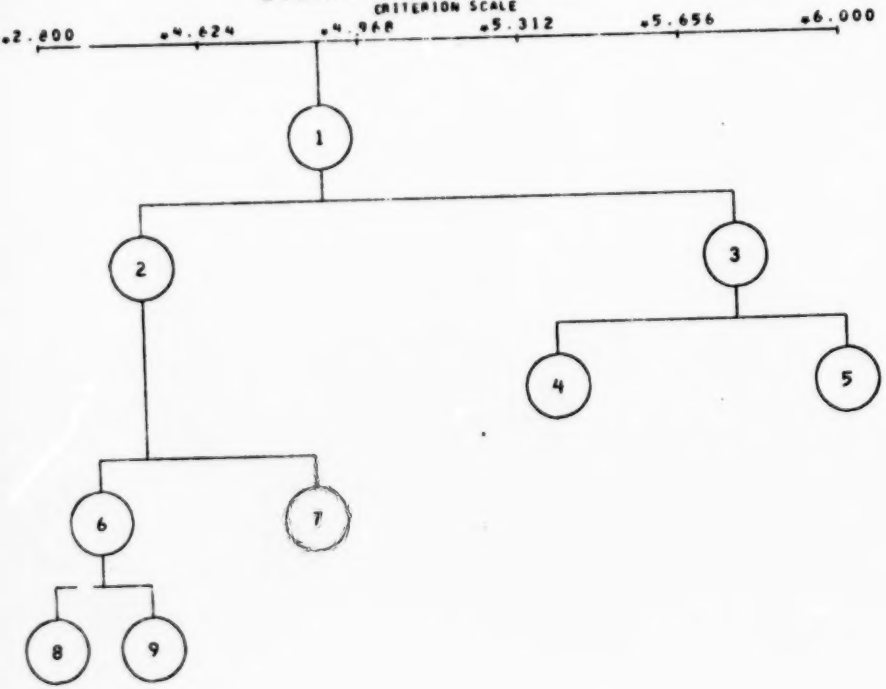
11/13/72
19.50.07
BATTELLE-COLUMBUS



SUMMARY CONTINUED	
PARENT 22 SPLITTING VARIABLE - WIND DIR	
MEAN= 3.14 S.D.= 4.14 N= 21 PREDICTOR VALUES -- 8 15 18 29 31 32 34 35 38 39 41 42 43 44 FINAL GROUP	MEAN= 9.00 S.D.= 7.35 N= 9 PREDICTOR VALUES -- 46 47 51 52 FINAL GROUP
PARENT 30 SPLITTING VARIABLE - NO2	
MEAN= 6.07 S.D.= 3.06 N= 28 PREDICTOR VALUES -- 21 23 25 26 27 28 29 30 32 33 34 35 36 38 45 46 FINAL GROUP	MEAN= 11.40 S.D.= 7.36 N= 5 PREDICTOR VALUES -- 18 19 20 FINAL GROUP
PARENT 24 SPLITTING VARIABLE - TEMP	
MEAN= 1.86 S.D.= 1.64 N= 7 PREDICTOR VALUES -- 26 27 29 32 34 36 FINAL GROUP	MEAN= 7.69 S.D.= 3.26 N= 25 PREDICTOR VALUES -- 37 38 40 42 43 44 45 46 47 49 50 52 53 55 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE

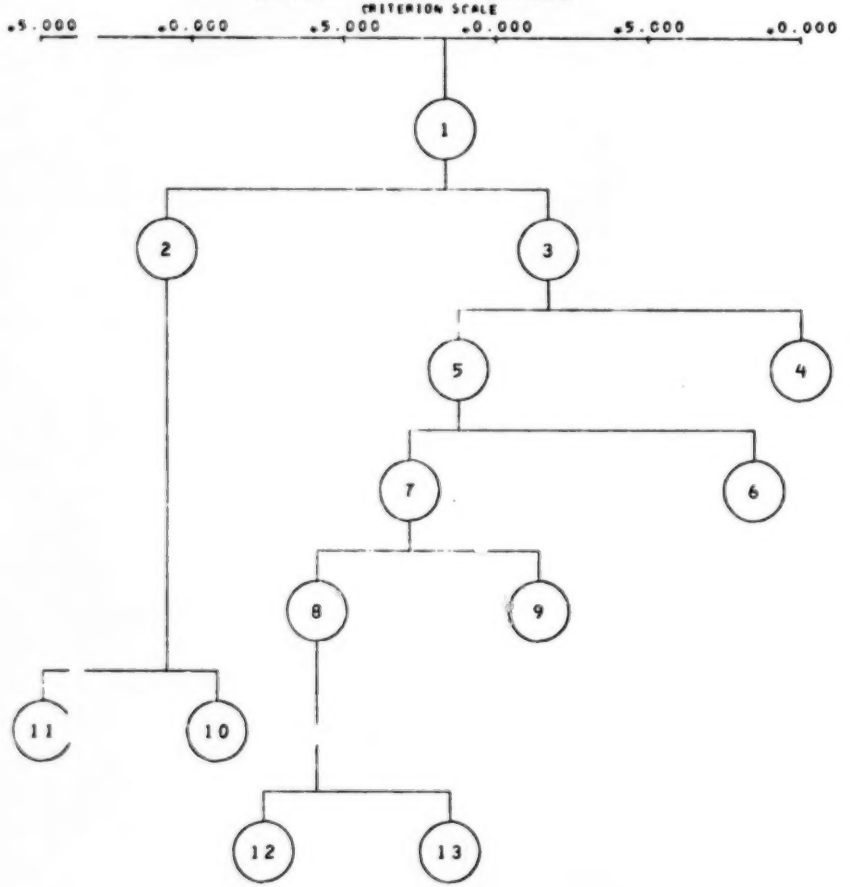


SUMMARY TABLE

---TOTAL GROUP---	
CRITERION - NH4+	
TOTAL GROUP N = 26 MEAN =2773.08 STD. DEV. =2096.99	
PARENT 1 SPLITTING VARIABLE - NTOT	
MEAN=511.11 S.D.=743.78 N= 18 PREDICTOR VALUES -- 0 4 6 7 9 11 12 13 18 21 24	MEAN=612.50 S.D.=183.68 N= 8 PREDICTOR VALUES -- 27 28 37 40 45 53 63
PARENT 3 SPLITTING VARIABLE - NTOT	
MEAN=366.67 S.D.=418.99 N= 3 PREDICTOR VALUES -- 27 28 37 FINAL GROUP	MEAN=360.00 S.D.=803.99 N= 5 PREDICTOR VALUES -- 40 45 53 63 FINAL GROUP
PARENT 2 SPLITTING VARIABLE - NTOT	
MEAN=178.57 S.D.=436.18 N= 14 PREDICTOR VALUES -- 0 4 6 7 9 11 12 13	MEAN=875.00 S.D.=286.14 N= 4 PREDICTOR VALUES -- 18 21 24 FINAL GROUP
PARENT 6 SPLITTING VARIABLE - NTOT	
MEAN=842.86 S.D.=324.51 N= 7 PREDICTOR VALUES -- 0 4 6 7 FINAL GROUP	MEAN=514.29 S.D.=223.15 N= 7 PREDICTOR VALUES -- 9 11 12 13 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



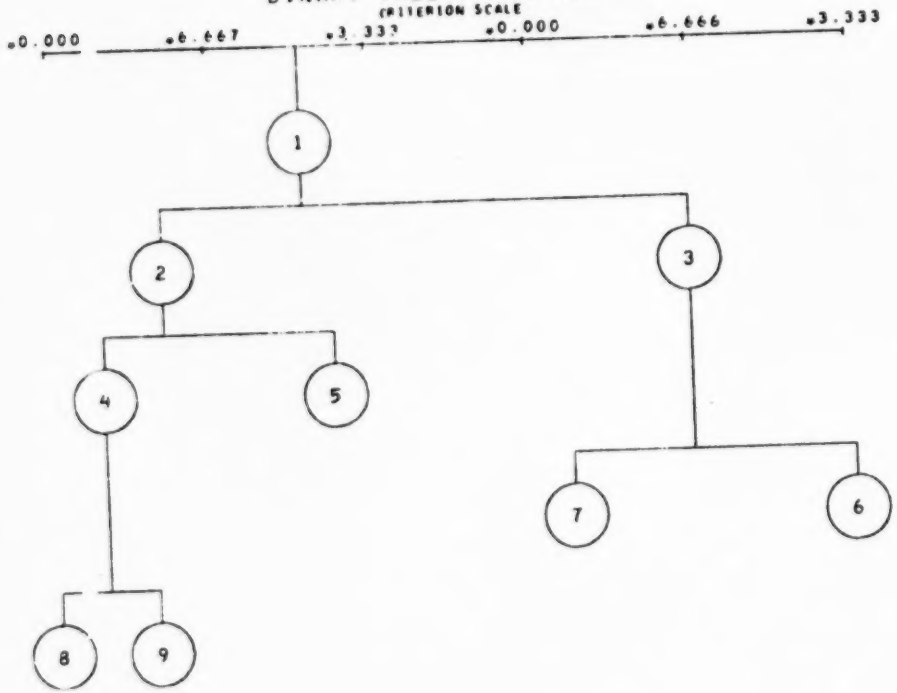
SUMMARY TABLE

---TOTAL GROUP---	
CRITERION - NO3- TOTAL GROUP N = 26 MEAN = 358.08 STD. DEV. = 118.71	
PARENT 1 SPLITTING VARIABLE - NO2	
MEAN=238.57 S.D.= 41.21 N= 7 PREDICTOR VALUES -- 0 4 9 13 14	MEAN=402.11 S.D.=107.69 N= 19 PREDICTOR VALUES -- 16 18 20 21 25 27 29 30 36 43 54 63
PARENT 3 SPLITTING VARIABLE - NO2	
MEAN=363.57 S.D.= 86.57 N= 14 PREDICTOR VALUES -- 25 27 29 30 36 43 54 63	MEAN=510.00 S.D.= 82.22 N= 5 PREDICTOR VALUES -- 16 18 20 21 FINAL GROUP
PARENT 5 SPLITTING VARIABLE - NTOT	
MEAN=342.50 S.D.= 73.27 N= 12 PREDICTOR VALUES -- 11 12 13 21 24 28 37 40 45 53 63	MEAN=490.00 S.D.= 40.00 N= 2 PREDICTOR VALUES -- 0 4 FINAL GROUP
PARENT 7 SPLITTING VARIABLE - NTOT	
MEAN=302.86 S.D.= 40.25 N= 7 PREDICTOR VALUES -- 11 12 13 21 24 28	MEAN=398.00 S.D.= 73.05 N= 5 PREDICTOR VALUES -- 37 40 45 53 63 FINAL GROUP
PARENT 2 SPLITTING VARIABLE - PAN	
MEAN=185.00 S.D.= 5.00 N= 2 PREDICTOR VALUES -- 25 37 FINAL GROUP	MEAN=260.00 S.D.= 27.57 N= 5 PREDICTOR VALUES -- 12 FINAL GROUP
PARENT 8 SPLITTING VARIABLE - AMMONIA	
MEAN=280.00 S.D.= 16.73 N= 5 PREDICTOR VALUES -- 0 4 8 12 FINAL GROUP	MEAN=360.00 S.D.= 20.00 N= 2 PREDICTOR VALUES -- 17 63 FINAL GROUP

Reproduced from best available copy.

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - NTOT

TOTAL GROUP N = 26
MEAN =3976.92
STD. DEV. =2640.12

PARENT 1 SPLITTING VARIABLE - NH4+

MEAN2584.21 S.D.=142.14 N= 19 PREDICTOR VALUES -- 0 6 8 9 10 11 13 14 15 19 22 23 26 33	MEAN8757.14 S.D.=671.49 N= 7 PREDICTOR VALUES -- 39 41 45 48 59 61 63

PARENT 2 SPLITTING VARIABLE - NH4+

MEAN985.71 S.D.=575.52 N= 14 PREDICTOR VALUES -- 0 6 8 9 10 11 13 14 15	MEAN4260.00 S.D.=467.33 N= 5 PREDICTOR VALUES -- 19 22 23 26 33 FINAL GROUP

PARENT 3 SPLITTING VARIABLE - WIND SP

MEAN575.00 S.D.=759.52 N= 4 PREDICTOR VALUES -- 20 46 FINAL GROUP	MEAN8333.33 S.D.=184.15 N= 3 PREDICTOR VALUES -- 3 14 16 FINAL GROUP

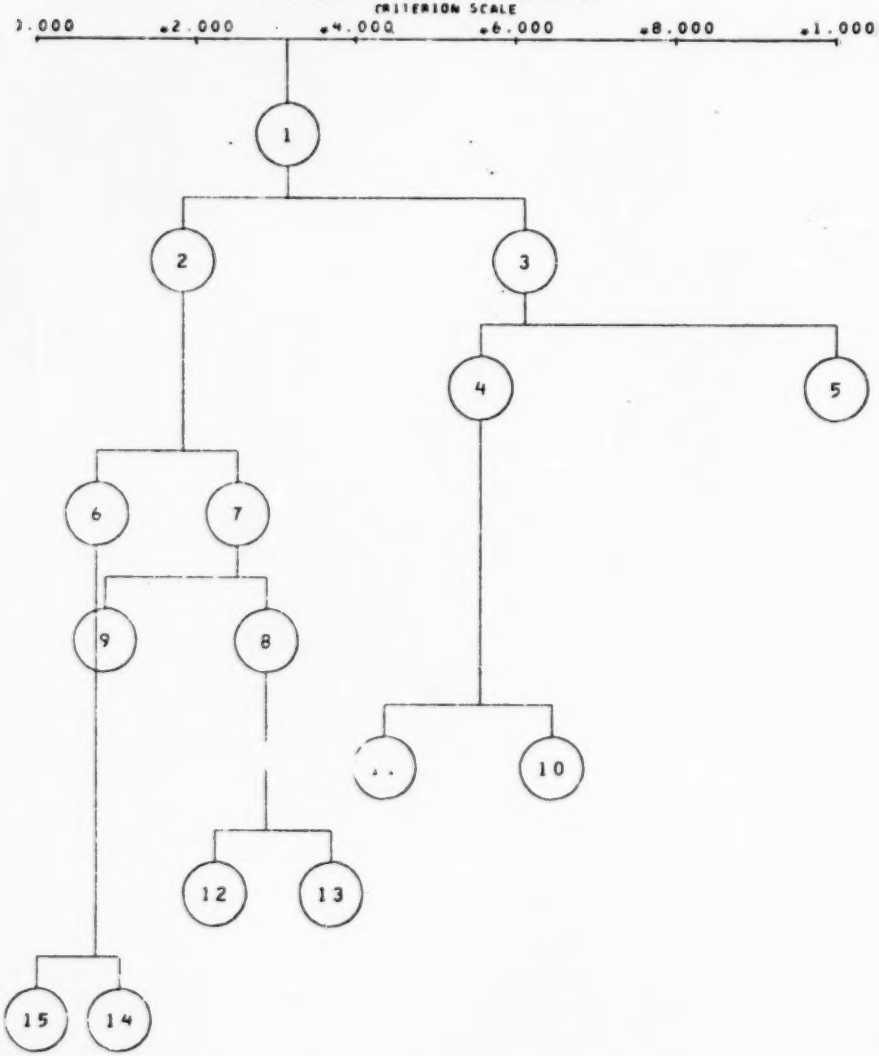
PARENT 4 SPLITTING VARIABLE - NH4+

MEAN500.00 S.D.=366.45 N= 7 PREDICTOR VALUES -- 0 6 8 9 FINAL GROUP	MEAN8471.43 S.D.=237.33 N= 7 PREDICTOR VALUES -- 10 11 13 14 15 FINAL GROUP

11/21/73
09.49.54
BATTELLE-COLUMBUS

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



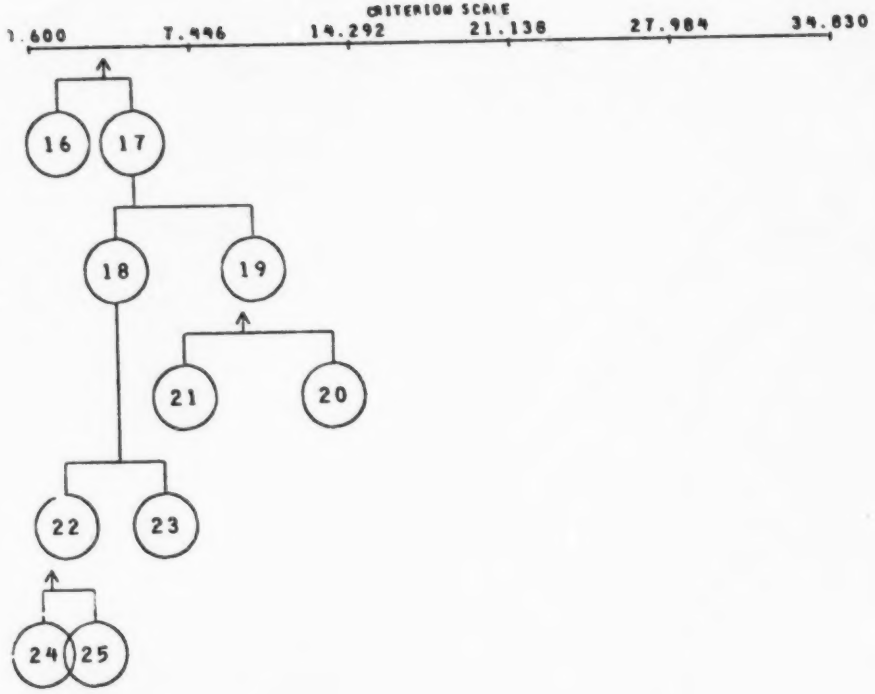
SUMMARY TABLE

---TOTAL GROUP---	
CRITERION - MASS TOTAL GROUP N = 26 MEAN =.496.15 STD. DEV. =.181.46	
PARENT 1 SPLITTING VARIABLE - NTOT	
MEAN.794.44 S.D.@285.29 N= 18 PREDICTOR VALUES -- 0 4 6 7 9 11 12 13 18 21 24	MEAN.575.00 S.D.@754.34 N= 8 PREDICTOR VALUES -- 27 28 37 40 45 53 63
PARENT 3 SPLITTING VARIABLE - HNO3C	
MEAN.071.43 S.D.@018.13 N= 7 PREDICTOR VALUES -- 10 16 21 26 47	MEAN.410.00 S.D.= 0.00 N= [illegible] PREDICTOR VALUES -- 63 FINAL GROUP
PARENT 2 SPLITTING VARIABLE - NO2	
MEAN.028.57 S.D.@010.24 N= 7 PREDICTOR VALUES -- 0 4 9 13 14	MEAN.372.73 S.D.@102.56 N= 11 PREDICTOR VALUES -- 16 18 20 25 27 29 30 36 43
PARENT 7 SPLITTING VARIABLE - HNO3M	
MEAN.900.00 S.D.@900.00 N= 2 PREDICTOR VALUES -- 51 63 FINAL GROUP	MEAN.366.67 S.D.@076.14 N= 4 PREDICTOR VALUES -- 0 11 17 23
PARENT 4 SPLITTING VARIABLE - TEMP	
MEAN.366.67 S.D.@745.41 N= 3 PREDICTOR VALUES -- 35 42 43 FINAL GROUP	MEAN.350.00 S.D.@610.04 N= 4 PREDICTOR VALUES -- 18 19 20 21 FINAL GROUP
PARENT 8 SPLITTING VARIABLE - NTOT	
MEAN.100.00 S.D.@863.33 N= 5 PREDICTOR VALUES -- 0 4 6 9 FINAL GROUP	MEAN.950.00 S.D.@511.13 N= 4 PREDICTOR VALUES -- 11 12 13 21 FINAL GROUP
PARENT 6 SPLITTING VARIABLE - GLOBAL	
MEAN.000.00 S.D.=400.00 N= 2 PREDICTOR VALUES -- 57 63 FINAL GROUP	MEAN.440.00 S.D.@448.59 N= 5 PREDICTOR VALUES -- 11 31 37 52 54 FINAL GROUP

11/21/73
09 50.14
BATTELLE-COLUMBUS

PAGE 1 OF 1

Reproduced from best available copy.



SUMMARY CONTINUED

PARENT 15 SPLITTING VARIABLE - HUMIDITY

MEAN= 1.75 S.D.= 2.58 N= 40
PREDICTOR VALUES -- 3 9 14 15 16 17 18 19 20 22 23 24 25 26 27 29 30 31 32 33 34 36 37 38
FINAL GROUP

MEAN= 4.94 S.D.= 6.38 N= 71
PREDICTOR VALUES -- 39 40 41 42 43 44 46 47 49 51 52 53 55 56 57 58 59 60 61 63

PARENT 17 SPLITTING VARIABLE - GLOBAL

MEAN= 4.11 S.D.= 5.20 N= 61
PREDICTOR VALUES -- 0 1 3 4 5 6 8 9 12 13 14 16 17 20 21 25

MEAN= 10.00 S.D.= 9.73 N= 10
PREDICTOR VALUES -- 26 35 37 44 46 47 56
FINAL GROUP

PARENT 8 SPLITTING VARIABLE - WIND DIR

MEAN= 6.94 S.D.= 6.69 N= 18
PREDICTOR VALUES -- 26 27 29 31 32 35 38 40 41 44 46 50
FINAL GROUP

MEAN= 13.33 S.D.= 9.18 N= 12
PREDICTOR VALUES -- 6 17 19 20 21 22 23 25
FINAL GROUP

PARENT 18 SPLITTING VARIABLE - WIND SP

MEAN= 1.74 S.D.= 4.01 N= 27
PREDICTOR VALUES -- 2 3 4 5 6 7 9 10 11 12 13 14 15
FINAL GROUP

MEAN= 6.88 S.D.= 5.26 N= 34
PREDICTOR VALUES -- 17 18 19 20 21 22 23 24 25 26 27 29 30 33 34 35 36 37 38
FINAL GROUP

PARENT 9 SPLITTING VARIABLE - OZONE

MEAN= 0.63 S.D.= 1.69 N= 220
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 ...
FINAL GROUP

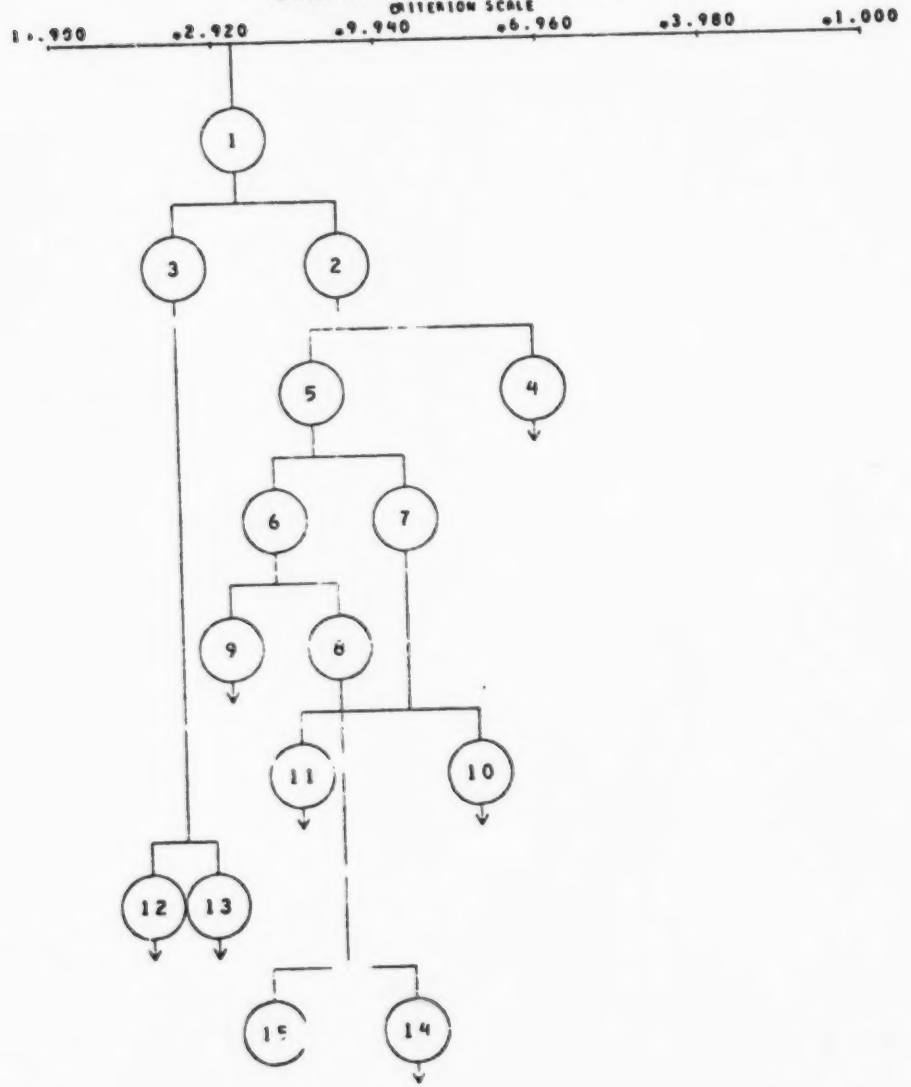
MEAN= 2.87 S.D.= 3.98 N= 48
PREDICTOR VALUES -- 29 30 31 32 33 34 35 36 37 38 39 42 44 46 47 48 49 51 53 56
FINAL GROUP

LOS ANGELES DATA

AUTOMATIC INTERACTION DETECTOR

FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - NOX

TOTAL GROUP N = 421
MEAN = 147.42
STD. DEV. = 102.58

PARENT 1 SPLITTING VARIABLE - OZONE

MEAN=101.65 S.D.= 46.18 N= 258 PREDICTOR VALUES -- 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 31 .	MEAN=219.87 S.D.=123.44 N= 163 PREDICTOR VALUES -- 0 1 2

PARENT 2 SPLITTING VARIABLE - HUMIDITY

MEAN=199.24 S.D.=106.57 N= 142 PREDICTOR VALUES -- 36 37 38 40 41 43 44 45 47 49 50 51 52 53 54 56 57 58 59 60 61 62 63	MEAN=359.33 S.D.=138.37 N= 21 PREDICTOR VALUES -- 7 8 10 15 17 19 22 24 28 29 30 31 33 35

PARENT 5 SPLITTING VARIABLE - HNO3

MEAN=169.94 S.D.= 86.74 N= 98 PREDICTOR VALUES -- 0 3	MEAN=264.50 S.D.=117.16 N= 44 PREDICTOR VALUES -- 8 9 11 12 14 16 19

PARENT 6 SPLITTING VARIABLE - WIND SP

MEAN=136.25 S.D.= 54.26 N= 56 PREDICTOR VALUES -- 1 2 3 4 5 6 7 9 10 11 12 13 15 16 17 18 19 20 22 23 26	MEAN=214.86 S.D.=100.50 N= 42 PREDICTOR VALUES -- 0

PARENT 7 SPLITTING VARIABLE - PAN

MEAN=185.35 S.D.= 78.95 N= 17 PREDICTOR VALUES -- 8 10 11 14 18	MEAN=314.33 S.D.=109.61 N= 27 PREDICTOR VALUES -- 0 3 5

PARENT 3 SPLITTING VARIABLE - HNO3

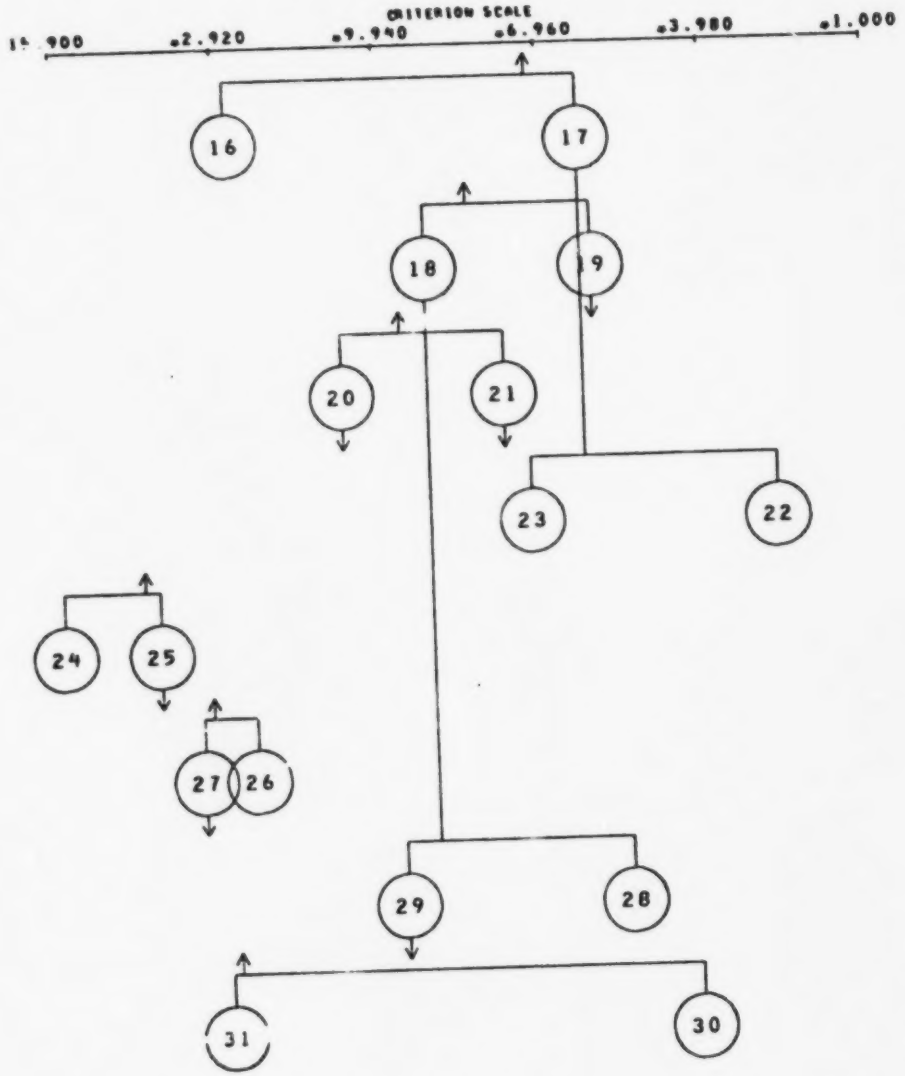
MEAN= 75.10 S.D.= 43.30 N= 112 PREDICTOR VALUES -- 0	MEAN=122.62 S.D.= 37.67 N= 146 PREDICTOR VALUES -- 2 3 5 6 8 9 11 12 14 16 17 19 20 22 23 25 27 28 30 34 36 37 42 48 50 52 53 63 .

PARENT 8 SPLITTING VARIABLE - HUMIDITY

MEAN=161.10 S.D.= 35.73 N= 20 PREDICTOR VALUES -- 61 63 FINAL GROUP	MEAN=263.73 S.D.=114.47 N= 22 PREDICTOR VALUES -- 36 37 38 40 41 43 44 45 47 52 56 57 58

12/20/73
10.01.02
BATTELLE-COLUMBUS

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED

PARENT 4 SPLITTING VARIABLE - HUMIDITY

MEAN=191.67 S.D.= 96.55 N= 3 PREDICTOR VALUES -- 7 8 10 FINAL GROUP	MEAN=395.61 S.D.=112.97 N= 10 PREDICTOR VALUES -- 15 17 19 22 24 28 29 30 31 33 35

PARENT 10 SPLITTING VARIABLE - GLOBAL

MEAN=283.15 S.D.= 94.40 N= 20 PREDICTOR VALUES -- 0	MEAN=403.43 S.D.=100.82 N= 7 PREDICTOR VALUES -- 1 6 8 10 27

PARENT 14 SPLITTING VARIABLE - TEMP

MEAN=221.07 S.D.= 91.55 N= 14 PREDICTOR VALUES -- 3 6 8 9 10 11 12	MEAN=338.37 S.D.=112.31 N= 6 PREDICTOR VALUES -- 13 14 15 17 18 21

PARENT 17 SPLITTING VARIABLE - WIND DIR

MEAN=356.29 S.D.= 56.30 N= 14 PREDICTOR VALUES -- 8 11 15 16 18 21 25 26 29 33 43 51 FINAL GROUP	MEAN=533.25 S.D.=140.26 N= 4 PREDICTOR VALUES -- 0 4 5 FINAL GROUP

PARENT 12 SPLITTING VARIABLE - HUMIDITY

MEAN= 15.94 S.D.= 17.78 N= 17 PREDICTOR VALUES -- 0 1 2 3 4 FINAL GROUP	MEAN= 85.60 S.D.= 37.62 N= 55 PREDICTOR VALUES -- 5 6 9 11 15 17 21 33 36 37 39 40 42 43 44 45 46 47 49 51 52 53 54 55 56 57 58 59 *

PARENT 13 SPLITTING VARIABLE - OZONE

MEAN=119.91 S.D.= 32.00 N= 119 PREDICTOR VALUES -- 10 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 31 32 33 34 35 36 37 38 39 *	MEAN=153.37 S.D.= 41.37 N= 27 PREDICTOR VALUES -- 3 4 5 6 7 8 9 FINAL GROUP

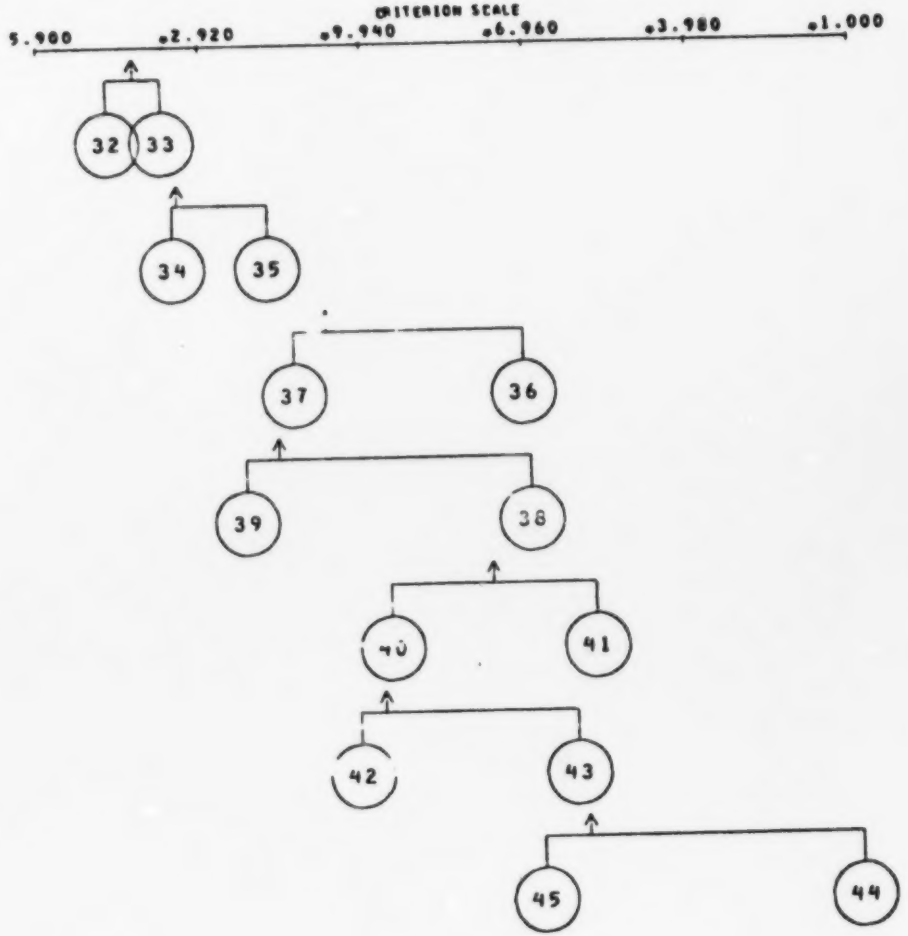
PARENT 18 SPLITTING VARIABLE - HNO3

MEAN=258.59 S.D.= 75.62 N= 17 PREDICTOR VALUES -- 9 11 14	MEAN=422.33 S.D.= 84.92 N= 3 PREDICTOR VALUES -- 0 FINAL GROUP

PARENT 9 SPLITTING VARIABLE - WIND DIR

MEAN=130.18 S.D.= 30.58 N= 55 PREDICTOR VALUES -- 10 15 17 18 21 24 25 27 28 30 32 33 34 35 36 38 39 42 44 45 46 47 48 49 50 51 53 54 * FINAL GROUP	MEAN=470.00 S.D.= 0.00 N= 1 PREDICTOR VALUES -- 6 FINAL GROUP

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED

PARENT 25 SPLITTING VARIABLE - TEMP

MEAN= 65.83 S.D.= 32.09 N= 47
PREDICTOR VALUES -- 5 6 9 11 14 15 16 17 18 19 20
FINAL GROUP

MEAN=109.12 S.D.= 32.13 N= 49
PREDICTOR VALUES -- 21 22 23 24 25 26 27 28 33 34 35 37 41 42 44 50 54 56 59 60 61
FINAL GROUP

PARENT 27 SPLITTING VARIABLE - HNO3

MEAN=111.45 S.D.= 28.34 N= 113
PREDICTOR VALUES -- 2 3 5 6 8 9 11 12 14 16 17 19 20 22 23 25 27 28 30 34 36 37 42 48
FINAL GROUP

MEAN=186.00 S.D.= 28.00 N= 6
PREDICTOR VALUES -- 50 52 53 63
FINAL GROUP

PARENT 20 SPLITTING VARIABLE - WIND DIR

MEAN=197.42 S.D.= 29.52 N= 12
PREDICTOR VALUES -- 13 16 20 21 24 25 31 33 54 56
FINAL GROUP

MEAN=263.00 S.D.= 43.00 N= 2
PREDICTOR VALUES -- 9 12
FINAL GROUP

PARENT 11 SPLITTING VARIABLE - WIND SP

MEAN=161.13 S.D.= 45.59 N= 15
PREDICTOR VALUES -- 1 2 3 5 7 8 11 12 26
FINAL GROUP

MEAN=267.00 S.D.= 2.00 N= 2
PREDICTOR VALUES -- 6
FINAL GROUP

PARENT 21 SPLITTING VARIABLE - PAN

MEAN=269.50 S.D.=115.57 N= 4
PREDICTOR VALUES -- 5 8
FINAL GROUP

MEAN=212.25 S.D.= 36.96 N= 4
PREDICTOR VALUES -- 11 18 26
FINAL GROUP

PARENT 29 SPLITTING VARIABLE - HNO3

MEAN=240.13 S.D.= 59.77 N= 15
PREDICTOR VALUES -- 9 11
FINAL GROUP

MEAN=297.00 S.D.= 18.00 N= 2
PREDICTOR VALUES -- 14
FINAL GROUP

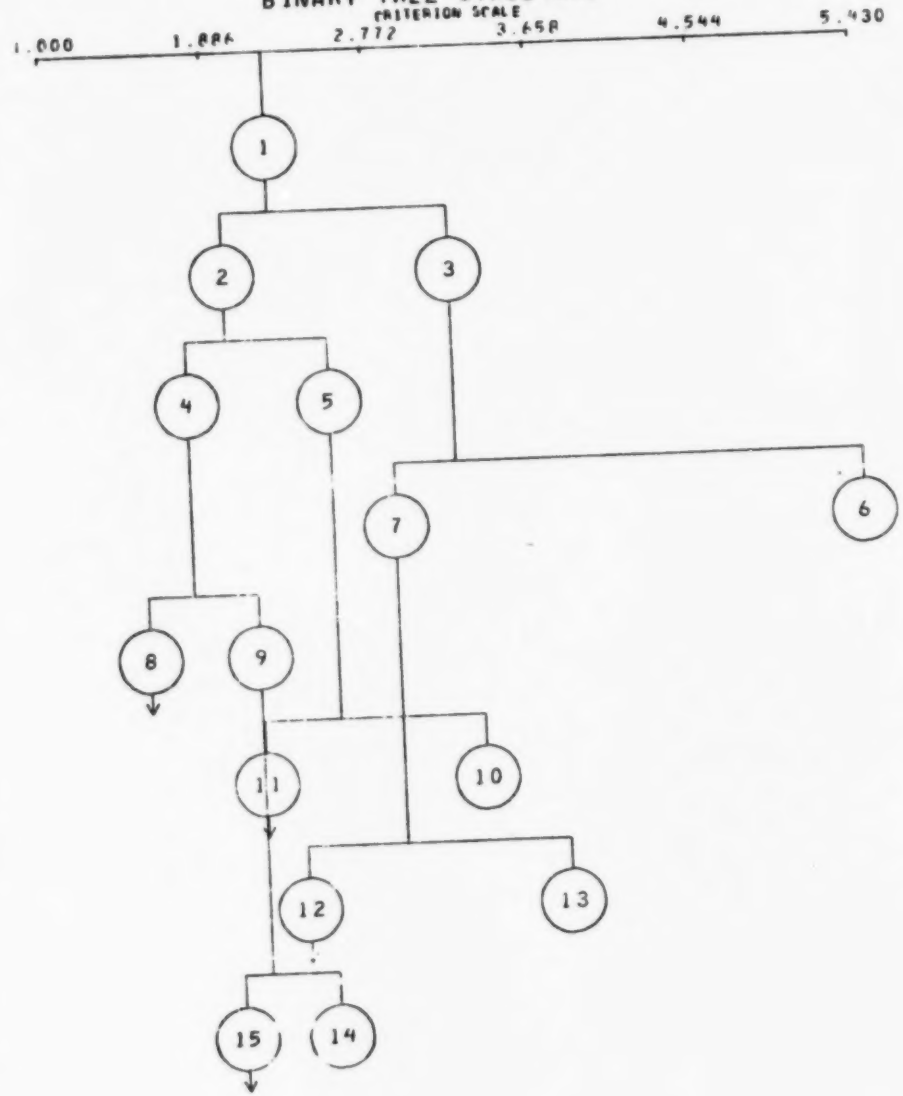
PARENT 19 SPLITTING VARIABLE - WIND DIR

MEAN=270.50 S.D.= 65.33 N= 6
PREDICTOR VALUES -- 27 29 36 43 55
FINAL GROUP

MEAN=261.00 S.D.= 0.00 N= 1
PREDICTOR VALUES -- 7
FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - NH3

TOTAL GROUP N = 249
MEAN = 2.23
STD. DEV. = 1.16

PARENT 1 SPLITTING VARIABLE - OZONE

MEAN= 1.97 S.D.= 0.94 N= 197
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

MEAN= 3.24 S.D.= 1.30 N= 52
PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 29 30 32 34 35 36 39 42 47 56 63

PARENT 2 SPLITTING VARIABLE - NO2

MEAN= 1.75 S.D.= 0.75 N= 142
PREDICTOR VALUES -- 0 1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

MEAN= 2.53 S.D.= 1.13 N= 55
PREDICTOR VALUES -- 26 27 28 29 30 31 33 34 35 36 38 40 41 42 44 45 46 51 52 57 58 60 61 62 63

PARENT 3 SPLITTING VARIABLE - PAN

MEAN= 2.87 S.D.= 1.11 N= 45
PREDICTOR VALUES -- 7 9 10 14 17 23 26 30 36 40 47 50 59 63

MEAN= 5.43 S.D.= 0.49 N= 7
PREDICTOR VALUES -- 3 5

FINAL GROUP

PARENT 4 SPLITTING VARIABLE - OZONE

MEAN= 1.50 S.D.= 0.59 N= 82
PREDICTOR VALUES -- 0 1 2 3 4

MEAN= 2.10 S.D.= 0.81 N= 60
PREDICTOR VALUES -- 5 6 7 8 9 10 11 12 13 14 15 16

PARENT 5 SPLITTING VARIABLE - TEMP

MEAN= 2.11 S.D.= 0.99 N= 36
PREDICTOR VALUES -- 15 16 17 18 19 20 21 22 24 25 26 27 29 30 33 34 35 37

MEAN= 3.22 S.D.= 0.92 N= 19
PREDICTOR VALUES -- 6 7 9 10 11 12 13 14

FINAL GROUP

PARENT 7 SPLITTING VARIABLE - HNO3

MEAN= 2.32 S.D.= 0.60 N= 28
PREDICTOR VALUES -- 0 3 5 6 8 11 14 16 17 19

MEAN= 3.76 S.D.= 1.16 N= 17
PREDICTOR VALUES -- 20 22 23 25 27 28 30 31 34 42 50 56 63

FINAL GROUP

PARENT 9 SPLITTING VARIABLE - PAN

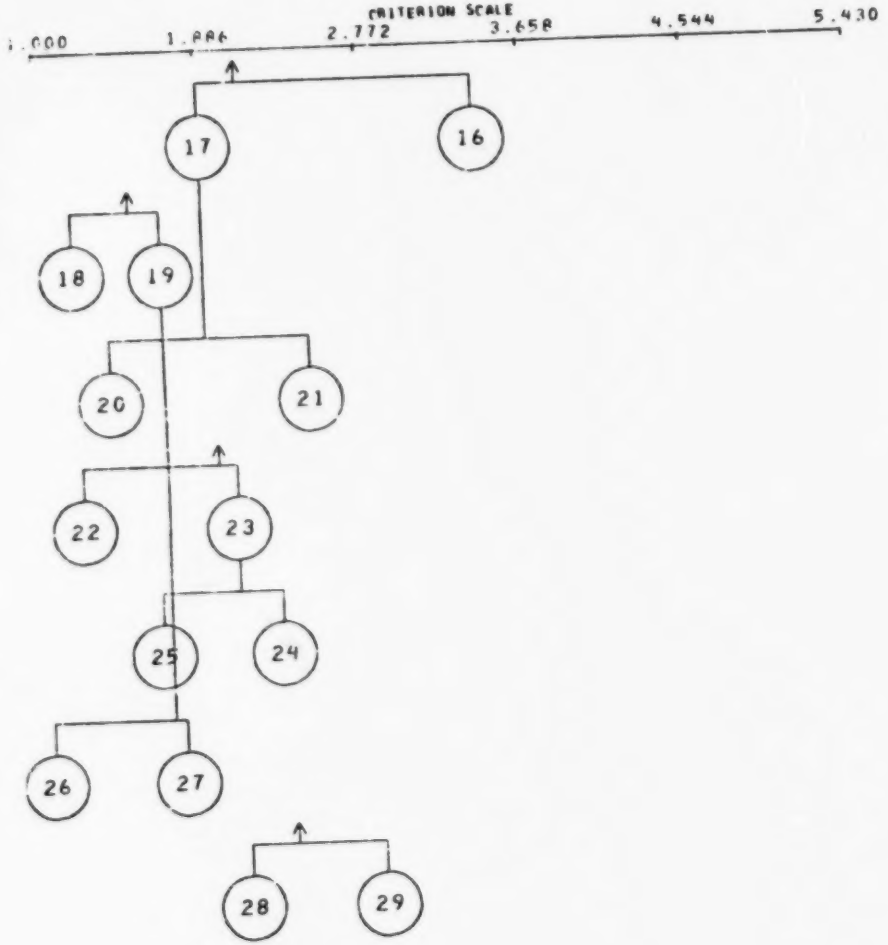
MEAN= 1.95 S.D.= 0.71 N= 43
PREDICTOR VALUES -- 7 10 14 17

MEAN= 2.47 S.D.= 0.92 N= 17
PREDICTOR VALUES -- 6 4 3 5

FINAL GROUP

01/09/79
11.28.12
BATTELLE-COLUMBUS

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED

PARENT 11 SPLITTING VARIABLE - PAN

MEAN= 1.90 S.D.= 0.89 N= 31
PREDICTOR VALUES -- 3 7 10 14 17 23

FINAL GROUP

MEAN= 3.40 S.D.= 0.46 N= 5
PREDICTOR VALUES -- 0 2

FINAL GROUP

PARENT 8 SPLITTING VARIABLE - PAN

MEAN= 1.10 S.D.= 0.54 N= 26
PREDICTOR VALUES -- 0

FINAL GROUP

MEAN= 1.67 S.D.= 0.54 N= 54
PREDICTOR VALUES -- 3 5 7 10 14

PARENT 17 SPLITTING VARIABLE - NO2

MEAN= 1.37 S.D.= 0.60 N= 16
PREDICTOR VALUES -- 26 27 28 29 30 31

FINAL GROUP

MEAN= 2.47 S.D.= 0.81 N= 15
PREDICTOR VALUES -- 32 34 35 36 39 45 51 52 58 62 61 42 43

FINAL GROUP

PARENT 15 SPLITTING VARIABLE - WIND DIR

MEAN= 1.20 S.D.= 0.40 N= 5
PREDICTOR VALUES -- 21 22 24 25

FINAL GROUP

MEAN= 2.05 S.D.= 0.69 N= 37
PREDICTOR VALUES -- 27 29 30 31 32 33 34 35 36 37 38 39 41 42 44 45 46 49 50 52 55

PARENT 23 SPLITTING VARIABLE - WIND DIR

MEAN= 1.62 S.D.= 0.49 N= 13
PREDICTOR VALUES -- 39 41 42 44 45 46 48 49 50 53 55

FINAL GROUP

MEAN= 2.29 S.D.= 0.88 N= 24
PREDICTOR VALUES -- 27 29 30 31 34 33 34 35 36 37 38

FINAL GROUP

PARENT 19 SPLITTING VARIABLE - WIND DIR

MEAN= 1.00 S.D.= 0.00 N= 5
PREDICTOR VALUES -- 1 6 13 16

FINAL GROUP

MEAN= 1.73 S.D.= 0.83 N= 49
PREDICTOR VALUES -- 25 21 27 30 31 32 34 36 38 39 40 41 42 43 44 46 47 48 50 51 55 57

FINAL GROUP

PARENT 12 SPLITTING VARIABLE - OZONE

MEAN= 2.06 S.D.= 0.40 N= 18
PREDICTOR VALUES -- 18 20 21 22 23 24 25 27 28

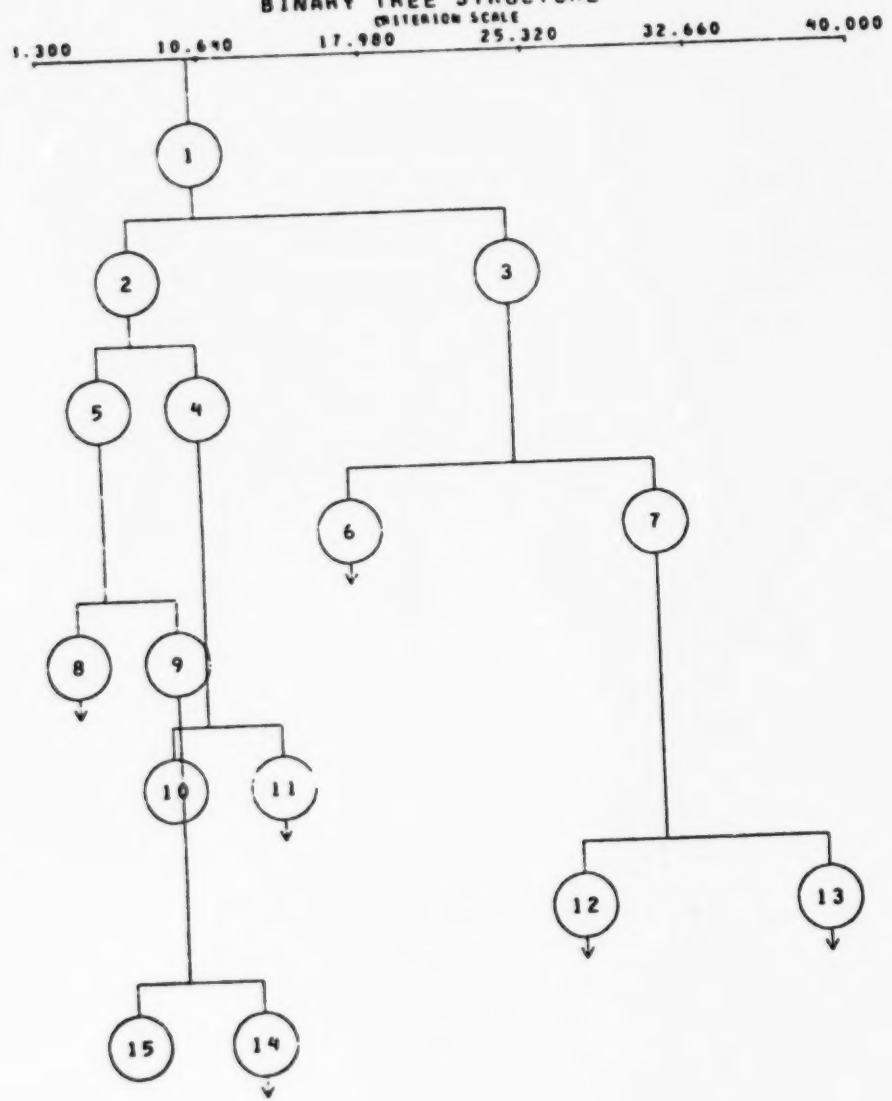
FINAL GROUP

MEAN= 2.60 S.D.= 0.66 N= 10
PREDICTOR VALUES -- 29 30 32 34 36 39 42

FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - PAN

TOTAL GROUP N = 421
MEAN = 10.17
STD. DEV. = 9.12

PARENT 1 SPLITTING VARIABLE - OZONE

MEAN= 7.18 S.D.= 5.05 N= 346 PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	MEAN= 24.35 S.D.= 10.24 N= 75 PREDICTOR VALUES -- 27 28 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 51 52 53 54 55 57 58

PARENT 2 SPLITTING VARIABLE - NO

MEAN= 5.57 S.D.= 4.45 N= 228 PREDICTOR VALUES -- 0 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MEAN= 10.06 S.D.= 4.02 N= 110 PREDICTOR VALUES -- 0 1 2 3

PARENT 3 SPLITTING VARIABLE - HNO3

MEAN= 16.76 S.D.= 7.67 N= 34 PREDICTOR VALUES -- 0 3 8 9 11 12	MEAN= 30.63 S.D.= 7.94 N= 41 PREDICTOR VALUES -- 14 16 17 19 22 23 25 27 28 30 34 36 37 42 48 56 52 53 63

PARENT 5 SPLITTING VARIABLE - NO2

MEAN= 9.29 S.D.= 3.03 N= 161 PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	MEAN= 8.75 S.D.= 5.50 N= 67 PREDICTOR VALUES -- 25 26 27 28 29 30 31 32 33 34 37 38 39 40 41 42 44 45 47 48 52 53 55 56 59 63

PARENT 4 SPLITTING VARIABLE - HNO3

MEAN= 8.43 S.D.= 4.17 N= 79 PREDICTOR VALUES -- 0 2 3 FINAL GROUP	MEAN= 13.36 S.D.= 6.24 N= 39 PREDICTOR VALUES -- 5 6 8 9 11 14 16 19 20 22 25 28 30

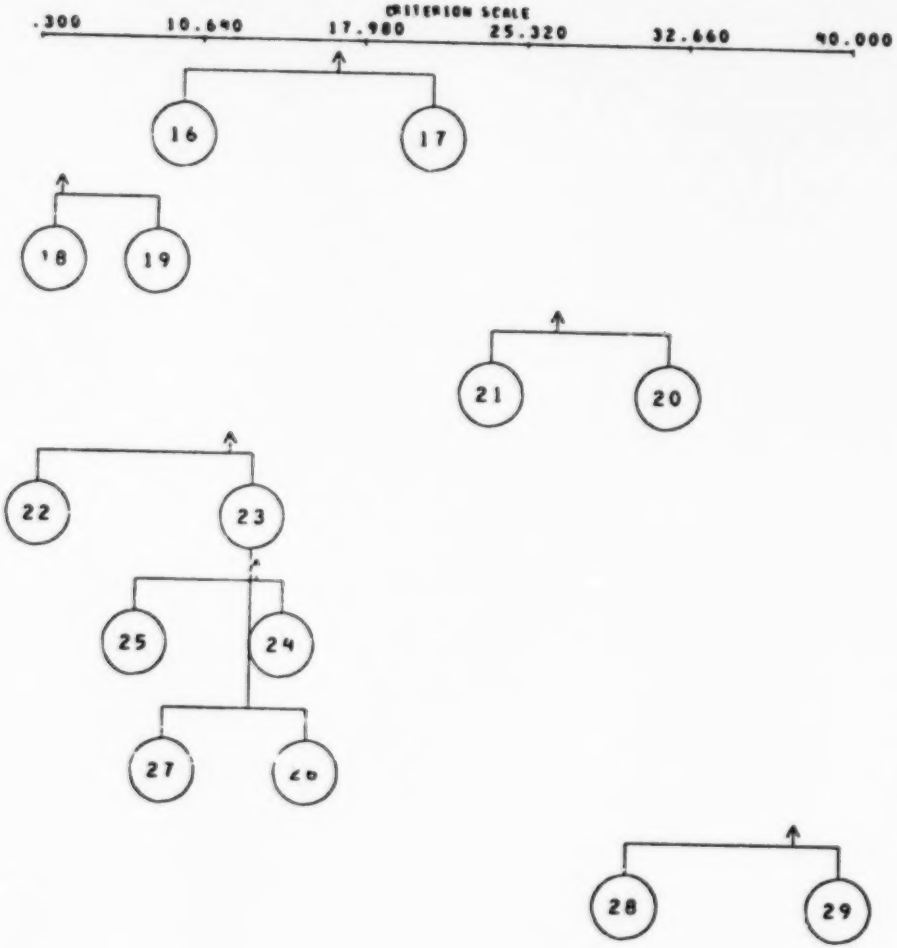
PARENT 7 SPLITTING VARIABLE - OZONE

MEAN= 26.85 S.D.= 6.91 N= 27 PREDICTOR VALUES -- 27 28 30 31 32 33 34 35 36 38 39 40 42 44 46 47	MEAN= 37.93 S.D.= 9.95 N= 14 PREDICTOR VALUES -- 48 51 52 53 54 55 57 58 60 62 63

PARENT 9 SPLITTING VARIABLE - HUMIDITY

MEAN= 6.26 S.D.= 4.15 N= 39 PREDICTOR VALUES -- 50 51 52 53 54 56 57 58 60 61 62 63 FINAL GROUP	MEAN= 12.07 S.D.= 5.61 N= 28 PREDICTOR VALUES -- 10 12 17 21 26 29 30 31 32 33 35 37 38 40 42 43 44 45 48 49

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



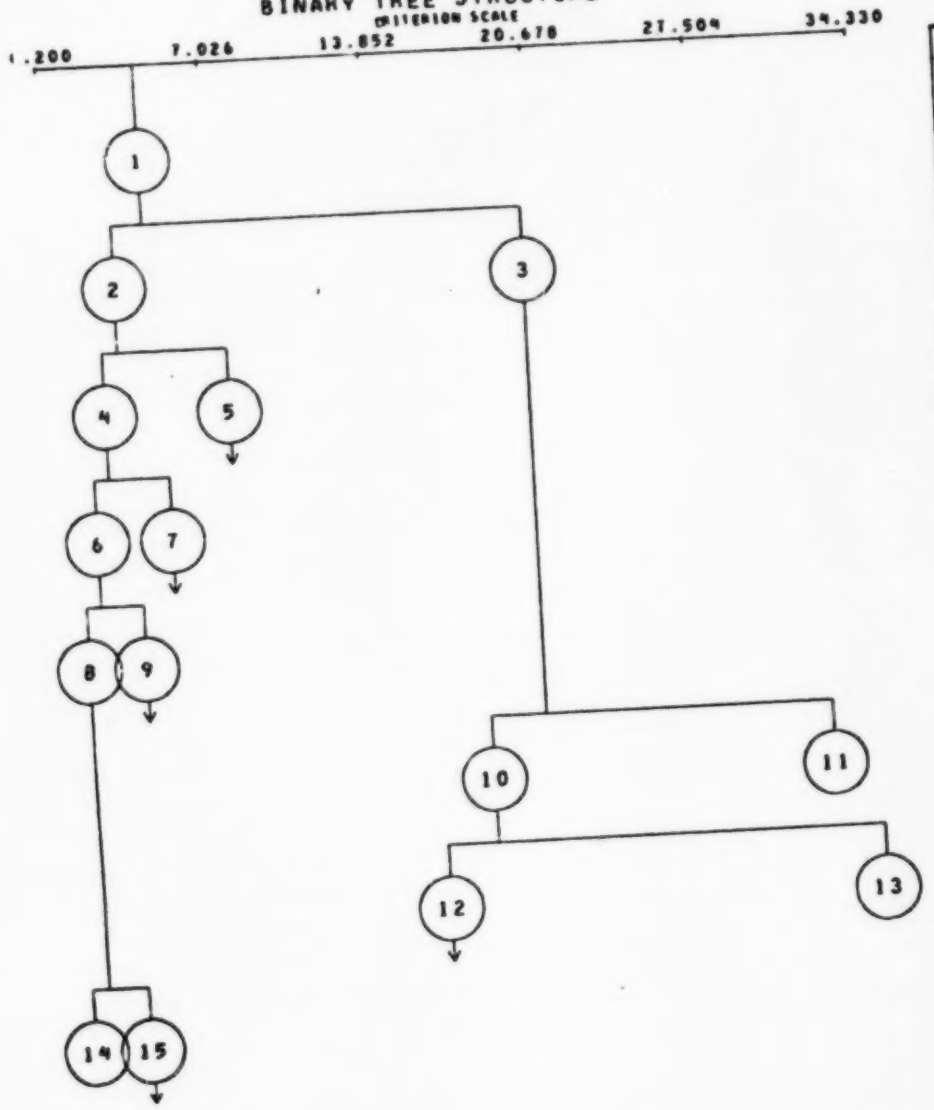
SUMMARY CONTINUED

PARENT 6 SPLITTING VARIABLE - HUMIDITY	
MEAN= 9.77 S.D.= 4.46 N= 13 PREDICTOR VALUES -- 0 1 2 3 4 5 6 8 FINAL GROUP	MEAN= 21.10 S.D.= 4.43 N= 21 PREDICTOR VALUES -- 11 19 21 22 23 26 30 31 33 35 38 39 40 54 FINAL GROUP
PARENT 8 SPLITTING VARIABLE - GLOBAL	
MEAN= 3.92 S.D.= 2.83 N= 150 PREDICTOR VALUES -- 0 1 2 3 5 6 7 8 10 11 12 13 14 15 17 27 29 30 FINAL GROUP	MEAN= 8.64 S.D.= 2.10 N= 11 PREDICTOR VALUES -- 32 36 40 43 54 59 63 FINAL GROUP
PARENT 12 SPLITTING VARIABLE - TEMP	
MEAN= 23.88 S.D.= 5.11 N= 17 PREDICTOR VALUES -- 36 38 39 40 41 42 43 FINAL GROUP	MEAN= 31.90 S.D.= 5.11 N= 16 PREDICTOR VALUES -- 25 27 30 31 32 34 35 FINAL GROUP
PARENT 14 SPLITTING VARIABLE - HUMIDITY	
MEAN= 3.33 S.D.= 2.49 N= 3 PREDICTOR VALUES -- 10 12 17 FINAL GROUP	MEAN= 13.12 S.D.= 4.93 N= 25 PREDICTOR VALUES -- 21 26 29 30 31 32 33 35 37 38 40 42 43 44 45 48 49
PARENT 11 SPLITTING VARIABLE - HUMIDITY	
MEAN= 7.86 S.D.= 2.53 N= 7 PREDICTOR VALUES -- 60 63 FINAL GROUP	MEAN= 14.56 S.D.= 3.67 N= 32 PREDICTOR VALUES -- 20 22 23 24 29 30 33 37 38 39 40 41 42 44 49 50 51 56 58 59 FINAL GROUP
PARENT 23 SPLITTING [illegible] - WIND SP	
MEAN= 9.20 S.D.= 2.36 N= 10 PREDICTOR VALUES -- 17 18 19 21 22 26 30 36 42 FINAL GROUP	[illegible] 5.73 S.D.= 4.43 N= 15 [illegible] VALUES -- 0 1 4 6 7 [illegible] 14 16 FINAL GROUP
PARENT 13 SPLITTING VARIABLE - GLOBAL	
MEAN= 30.33 S.D.= 1.89 N= 3 PREDICTOR VALUES -- 13 25 28 FINAL GROUP	MEAN= 40.00 S.D.= 3.19 N= 11 PREDICTOR VALUES -- 31 38 39 42 43 45 47 49 52 54 57 FINAL GROUP

12/20/78
10.06.19
[illegible]

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---

CRITERION - HNO3

TOTAL GROUP N = 421
MEAN = 4.31
STD. DEV. = 6.49

PARENT 1 SPLITTING VARIABLE - PAN

MEAN= 3.09 S.D.= 4.14 N= 390
PREDICTOR VALUES -- 0 1 3 5 8 10 11 14 18 19 20 22 23 26 29 31 34

MEAN= 20.32 S.D.= 8.99 N= 31
PREDICTOR VALUES -- 37 39 42 45 46 49 52 54 57 60 63

PARENT 2 SPLITTING VARIABLE - PAN

MEAN= 2.38 S.D.= 3.65 N= 341
PREDICTOR VALUES -- 0 1 3 5 8 10 11 14 18 19 20 22

MEAN= 7.65 S.D.= 4.36 N= 49
PREDICTOR VALUES -- 23 26 29 31 34

PARENT 4 SPLITTING VARIABLE - NO2

MEAN= 1.76 S.D.= 3.11 N= 275
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

MEAN= 6.95 S.D.= 4.56 N= 66
PREDICTOR VALUES -- 28 29 30 31 32 32 34 35 36 37 38 39 40 42 44 45 47 48 52 53 54 55 56 63

PARENT 6 SPLITTING VARIABLE - OZONE

MEAN= 1.15 S.D.= 2.55 N= 206
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9

MEAN= 3.50 S.D.= 3.84 N= 69
PREDICTOR VALUES -- 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 35 36 37 38 39 44

PARENT 3 SPLITTING VARIABLE - NOX

MEAN= 10.00 S.D.= 7.91 N= 26
PREDICTOR VALUES -- 0 9 10 11 12 13 14 15

MEAN= 32.40 S.D.= 1.82 N= 5
PREDICTOR VALUES -- 16 17 21

FINAL GROUP

PARENT 10 SPLITTING VARIABLE - OZONE

MEAN= 15.87 S.D.= 5.42 N= 23
PREDICTOR VALUES -- 28 31 34 38 39 40 42 44 45 46 47 48 51 52 53 54 57 58

MEAN= 34.33 S.D.= 4.03 N= 3
PREDICTOR VALUES -- 60 62 63

FINAL GROUP

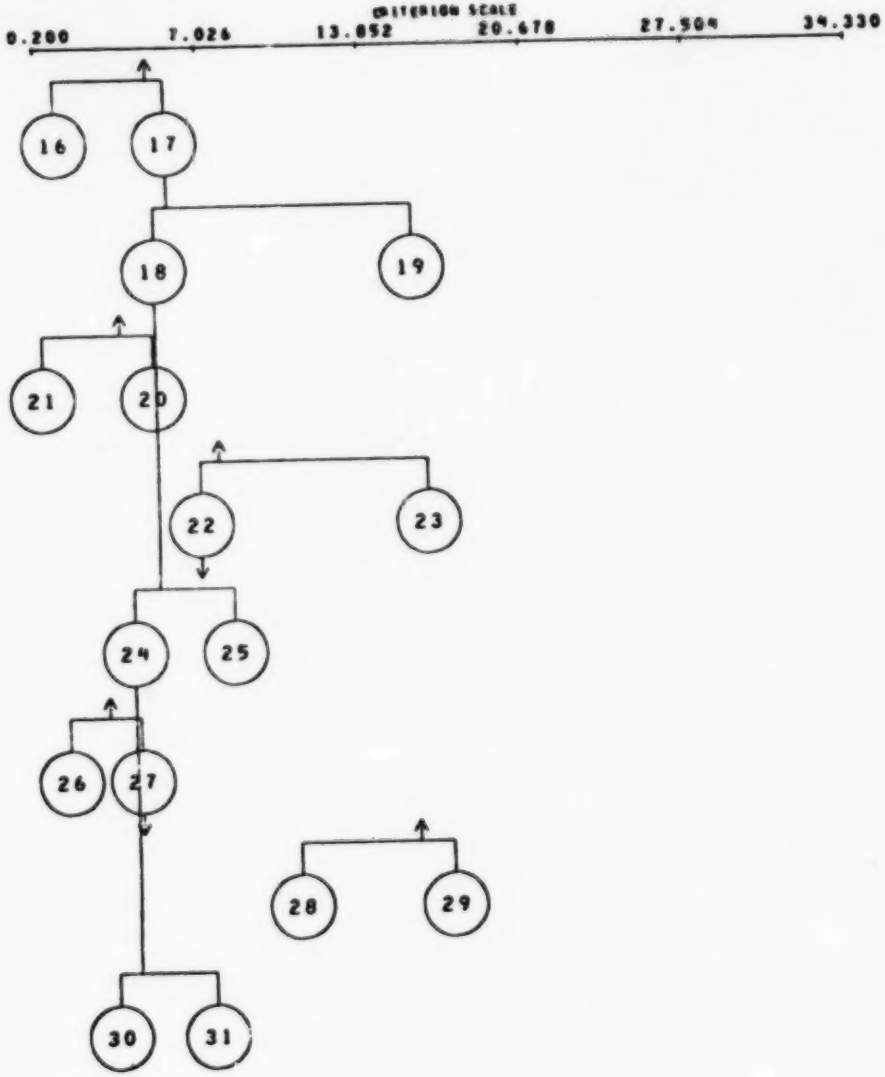
PARENT 8 SPLITTING VARIABLE - NO

MEAN= 0.42 S.D.= 1.55 N= 190
PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 8 9

MEAN= 2.82 S.D.= 3.97 N= 82
PREDICTOR VALUES -- 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 32 33 34 35 36 38 39 44

FINAL GROUP

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



SUMMARY CONTINUED

PARENT 7 SPLITTING VARIABLE - HUMIDITY

MEAN= 1.00 S.D.= 2.00 N= 10 PREDICTOR VALUES -- 5 6 8 10 12 17 29 30 FINAL GROUP	MEAN= 5.66 S.D.= 4.96 N= 56 PREDICTOR VALUES -- 31 32 33 36 40 41 42 43 44 45 47 48 49 50 51 52 53 54 56 57 58 60 61 62 63

PARENT 17 SPLITTING VARIABLE - TEMP

MEAN= 5.08 S.D.= 3.81 N= 53 PREDICTOR VALUES -- 4 5 6 9 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 31 32 35	MEAN= 10.00 S.D.= 1.63 N= 3 PREDICTOR VALUES -- 38 42 43 FINAL GROUP

PARENT 9 SPLITTING VARIABLE - TEMP

MEAN= 0.25 S.D.= 0.77 N= 20 PREDICTOR VALUES -- 48 50 52 53 55 57 58 59 60 62 63 FINAL GROUP	MEAN= 4.94 S.D.= 3.77 N= 49 PREDICTOR VALUES -- 18 19 20 21 22 23 24 25 26 27 28 30 31 32 33 34 35 36 37 38 39 FINAL GROUP

PARENT 5 SPLITTING VARIABLE - GLOBAL

MEAN= 6.87 S.D.= 3.36 N= 45 PREDICTOR VALUES -- 0 1 2 7 9 10 12 18 20 22 23 24 28 35 38 39 43 46 48 49 51 52 53 59	MEAN= 16.50 S.D.= 0.50 N= 4 PREDICTOR VALUES -- 56 59 62 FINAL GROUP

PARENT 18 SPLITTING VARIABLE - NO2

MEAN= 3.95 S.D.= 3.73 N= 39 PREDICTOR VALUES -- 28 29 30 31 32 33 34 35 36 37 38 39	MEAN= 8.21 S.D.= 1.66 N= 16 PREDICTOR VALUES -- 40 42 44 47 48 52 53 54 55 56 FINAL GROUP

PARENT 15 SPLITTING VARIABLE - HUMIDITY

MEAN= 1.11 S.D.= 2.22 N= 27 PREDICTOR VALUES -- 15 17 19 22 24 28 33 35 36 37 40 41 43 44 45 47 49 54 FINAL GROUP	MEAN= 6.14 S.D.= 3.68 N= 35 PREDICTOR VALUES -- 56 57 58 59 60 63

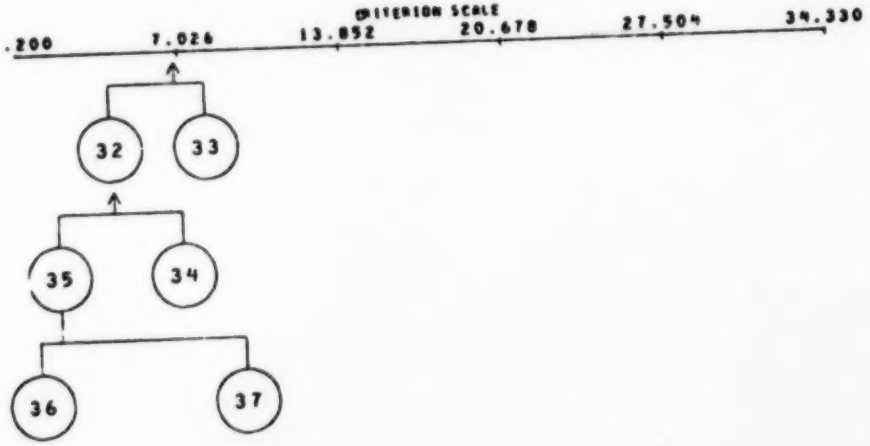
PARENT 12 SPLITTING VARIABLE - TEMP

MEAN= 10.60 S.D.= 3.[illegible] N= 5 PREDICTOR VALUES -- 25 27 31 32 34 FINAL GROUP	MEAN= 17.28 S.D.= 4.94 N= 18 PREDICTOR VALUES -- 35 37 38 39 40 41 42 43 FINAL GROUP

PARENT 24 SPLITTING VARIABLE - OZONE

MEAN= 3.00 S.D.= 3.06 N= 30 PREDICTOR VALUES -- 0 1 2 3 4 5 6 7 FINAL GROUP	MEAN= 7.11 S.D.= 4.01 N= 9 PREDICTOR VALUES -- 8 9 10 11 20 28 FINAL GROUP

FATE OF NOX ..... AID ANALYSIS
...CONTINUED...



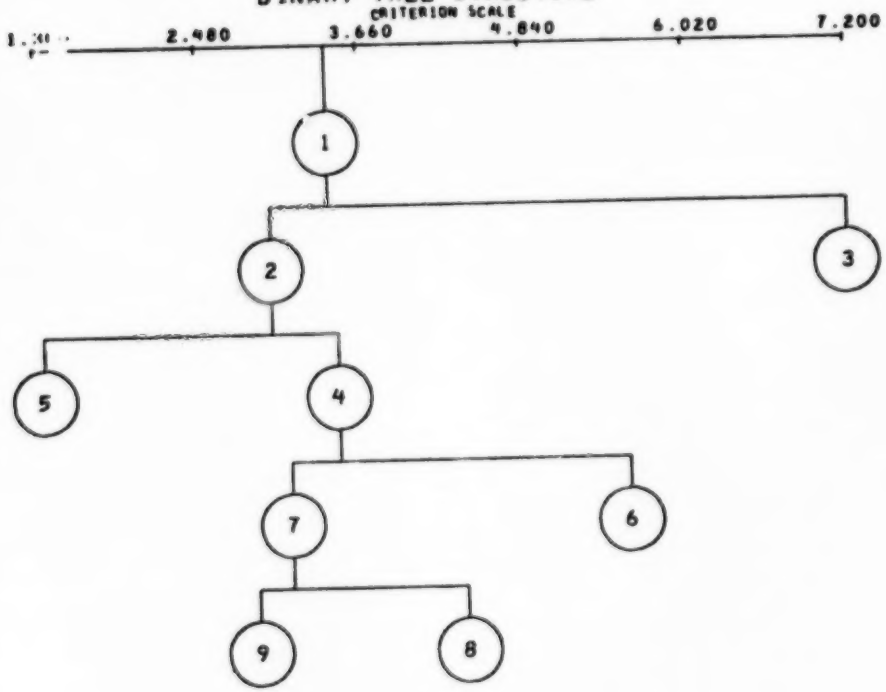
SUMMARY CONTINUED

PARENT 22 SPLITTING VARIABLE - GLOBAL	
MEAN= 9.87 S.D.= 2.99 N= 14 PREDICTOR VALUES -- 0 1 2 7 9 FINAL GROUP	MEAN= 8.13 S.D.= 2.76 N= 31 PREDICTOR VALUES -- 10 12 19 20 22 23 24 28 35 38 39 42 46 48 49 51 52 53 55 FINAL GROUP
PARENT 27 SPLITTING VARIABLE - NO2	
MEAN= 1.79 S.D.= 3.51 N= 19 PREDICTOR VALUES -- 16 17 18 19 20 21 22 24 25 27	MEAN= 7.00 S.D.= 0.00 N= 16 PREDICTOR VALUES -- 0 3 4 5 7 6 10 13 15 FINAL GROUP
PARENT 35 SPLITTING VARIABLE - TEMP	
MEAN= 8.82 S.D.= 2.26 N= 17 PREDICTOR VALUES -- 6 8 10 11 12 13 14 15 16 FINAL GROUP	MEAN= 9.50 S.D.= 2.50 N= 2 PREDICTOR VALUES -- 19 22 FINAL GROUP

12/29/73
10 00.42

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE

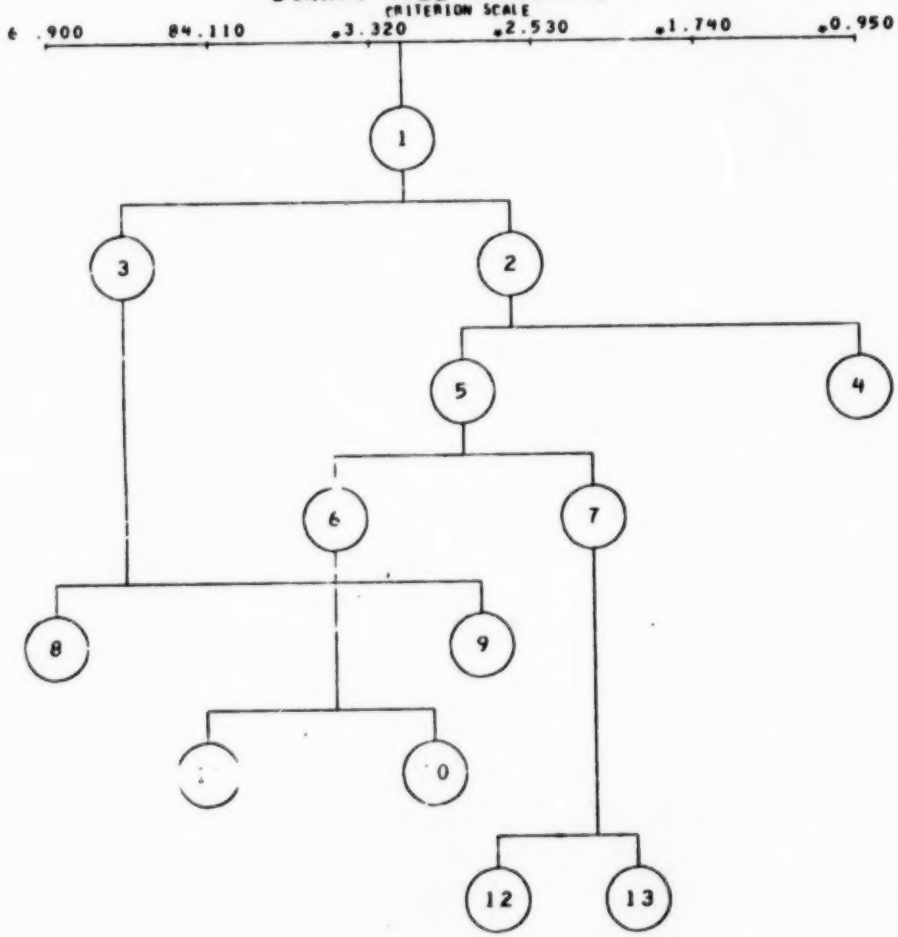


SUMMARY TABLE

---TOTAL GROUP---	
CRITERION -NH4+	
TOTAL GROUP N = 10	
MEAN = 3.43	
STD. DEV. = 1.76	
PARENT 1 SPLITTING VARIABLE - NOX	
MEAN= 3.01 S.D.= 1.30 N= 9 PREDICTOR VALUES -- 0 5 9 16 18 20 49 51	MEAN= 7.20 S.D.= 0.00 N= 1 PREDICTOR VALUES -- 63 FINAL GROUP
PARENT 2 SPLITTING VARIABLE - NH3	
MEAN= 1.34 S.D.= 0.36 N= 2 PREDICTOR VALUES -- 27 63 FINAL GROUP	MEAN= 3.49 S.D.= 1.05 N= 7 PREDICTOR VALUES -- 0
PARENT 4 SPLITTING VARIABLE - NOX	
MEAN= 3.13 S.D.= 0.65 N= 6 PREDICTOR VALUES -- 9 16 18 20 49 51	MEAN= 5.60 S.D.= 0.00 N= 1 PREDICTOR VALUES -- 5 FINAL GROUP
PARENT 7 SPLITTING VARIABLE - HNO3M	
MEAN= 2.88 S.D.= 0.34 N= 5 PREDICTOR VALUES -- 1 4 6 10 18 FINAL GROUP	MEAN= 4.40 S.D.= 0.00 N= 1 PREDICTOR VALUES -- 0 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



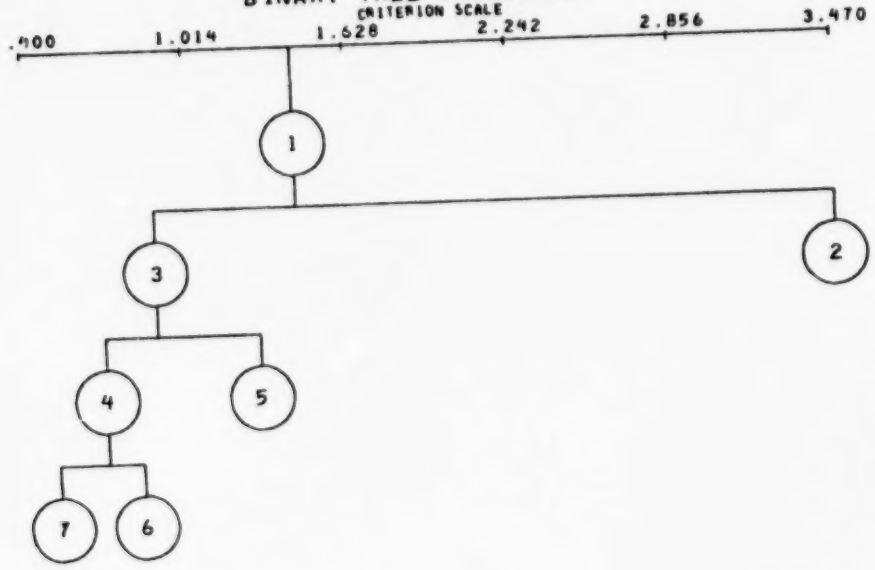
SUMMARY TABLE

---TOTAL GROUP---	
CRITERION -MASS TOTAL GROUP N = 22 MEAN = 107.10 STD. DEV. = 33.10	
PARENT 1 SPLITTING VARIABLE - WIND SP	
MEAN= 73.45 S.D.= 19.96 N= 6 PREDICTOR VALUES -- 43 45 49 52 58 63	MEAN=119.72 S.D.= 27.80 N= 16 PREDICTOR VALUES -- 0 9 14 18 23 28 29 30 33 34 35 38 42
PARENT 2 SPLITTING VARIABLE - WIND SP	
MEAN=113.84 S.D.= 20.19 N= 14 PREDICTOR VALUES -- 14 18 23 28 29 30 33 34 35 38 42	MEAN=160.95 S.D.= 37.25 N= 2 PREDICTOR VALUES -- 0 9 FINAL GROUP
PARENT 5 SPLITTING VARIABLE - HNO3C	
MEAN= 98.44 S.D.= 15.53 N= 7 PREDICTOR VALUES -- 0 5 10	MEAN=129.23 S.D.= 10.02 N= 7 PREDICTOR VALUES -- 21 26 36 52 57 63
PARENT 3 SPLITTING VARIABLE - HNO3M	
MEAN= 64.98 S.D.= 6.91 N= 5 PREDICTOR VALUES -- 0 1 2 4 9 FINAL GROUP	MEAN=115.80 S.D.= 0.00 N= 1 PREDICTOR VALUES -- 10 FINAL GROUP
PARENT 6 SPLITTING VARIABLE - WIND SP	
MEAN= 83.00 S.D.= 8.62 N= 3 PREDICTOR VALUES -- 30 35 38 FINAL GROUP	MEAN=110.02 S.D.= 7.32 N= 4 PREDICTOR VALUES -- 14 23 28 FINAL GROUP
PARENT 7 SPLITTING VARIABLE - WIND SP	
MEAN=117.30 S.D.= 0.80 N= 2 PREDICTOR VALUES -- 18 28 FINAL GROUP	MEAN=134.00 S.D.= 7.70 N= 5 PREDICTOR VALUES -- 29 33 34 35 42 FINAL GROUP

01/09/79
13:53:45
BATTELLE COLUMBUS

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE

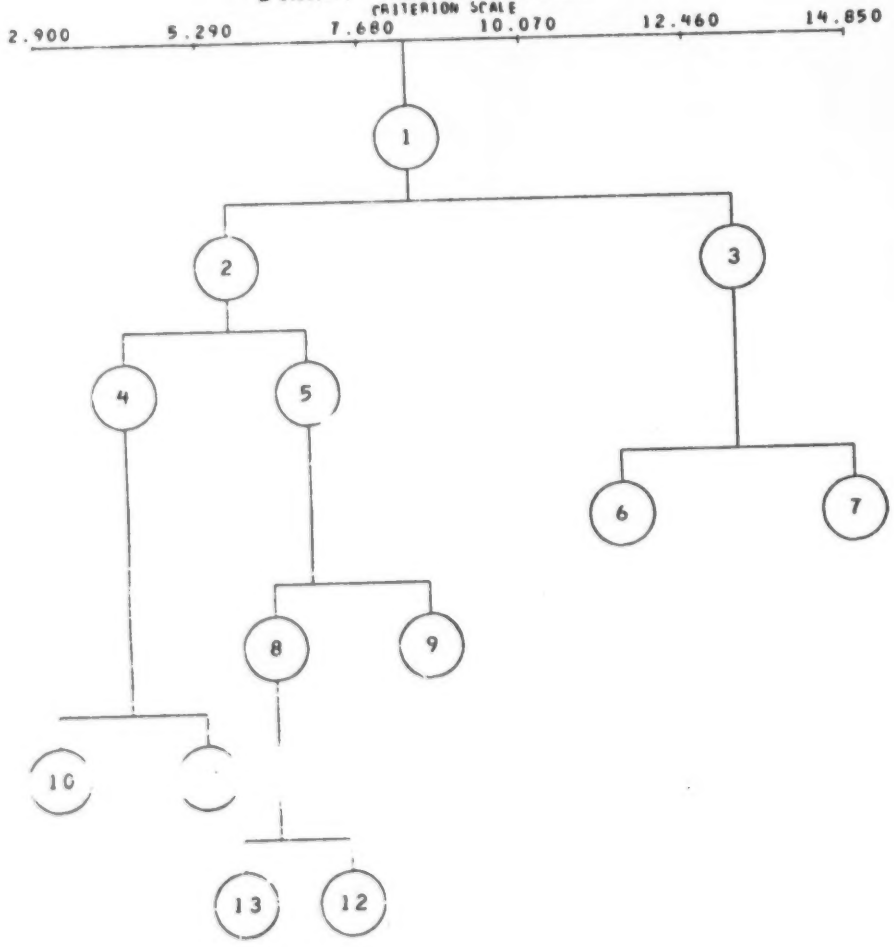


SUMMARY TABLE

---TOTAL GROUP---	
CRITERION -NO3-	
TOTAL GROUP N = 19 MEAN = 1.43 STD. DEV. = 1.13	
PARENT 1 SPLITTING VARIABLE - WIND SP	
MEAN= 0.89 S.D.= 0.34 N= 15 PREDICTOR VALUES -- 18 23 28 29 30 33 34 35 38 42 49 52 63	MEAN= 3.47 S.D.= 0.55 N= 4 PREDICTOR VALUES -- 0 9 14 FINAL GROUP
PARENT 3 SPLITTING VARIABLE - NO	
MEAN= 0.69 S.D.= 0.19 N= 10 PREDICTOR VALUES -- 0 3 14 17 18	MEAN= 1.28 S.D.= 0.21 N= 5 PREDICTOR VALUES -- 19 28 43 46 49 FINAL GROUP
PARENT 4 SPLITTING VARIABLE - TEMP	
MEAN= 0.50 S.D.= 0.16 N= 4 PREDICTOR VALUES -- 15 21 24 29 FINAL GROUP	MEAN= 0.82 S.D.= 0.09 N= 6 PREDICTOR VALUES -- 2 3 6 9 12 14 FINAL GROUP

AUTOMATIC INTERACTION DETECTOR
FATE OF NOX ..... AID ANALYSIS

BINARY TREE STRUCTURE



SUMMARY TABLE

---TOTAL GROUP---	
CRITERION -NTOT TOTAL GROUP N = 22 MEAN = 8.38 STD. DEV. = 4.10	
PARENT 1 SPLITTING VARIABLE - NH4+	
MEAN= 5.66 S.D.= 1.86 N= 14 PREDICTOR VALUES -- 0 1 2 3 4 5	MEAN= 13.19 S.D.= 2.12 N= 8 PREDICTOR VALUES -- 6 7 8 10 11 12
PARENT 2 SPLITTING VARIABLE - NH4+	
MEAN= 4.10 S.D.= 1.33 N= 6 PREDICTOR VALUES -- 0 1	MEAN= 6.82 S.D.= 1.25 N= 8 PREDICTOR VALUES -- 2 3 4 5
PARENT 3 SPLITTING VARIABLE - NO2	
MEAN= 11.92 S.D.= 1.19 N= 4 PREDICTOR VALUES -- 9 14 15 20 FINAL GROUP	MEAN= 14.85 S.D.= 1.36 N= 4 PREDICTOR VALUES -- 30 40 41 63 FINAL GROUP
PARENT 5 SPLITTING VARIABLE - NH4+	
MEAN= 6.25 S.D.= 0.81 N= 6 PREDICTOR VALUES -- 2 3	MEAN= 8.55 S.D.= 0.55 N= 2 PREDICTOR VALUES -- 4 5 FINAL GROUP
PARENT 4 SPLITTING VARIABLE - NOX	
MEAN= 3.00 S.D.= 0.51 N= 3 PREDICTOR VALUES -- 4 12 34 FINAL GROUP	MEAN= 5.20 S.D.= 0.92 N= 3 PREDICTOR VALUES -- 45 55 61 FINAL GROUP
PARENT 8 SPLITTING VARIABLE - WIND SP	
MEAN= 5.72 S.D.= 0.38 N= 4 PREDICTOR VALUES -- 38 45 49 63 FINAL GROUP	MEAN= 7.30 S.D.= 0.20 N= 2 PREDICTOR VALUES -- 19 20 FINAL GROUP